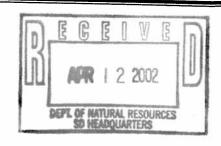


### Environmental Engineering and Science



Site Investigation and
Remedial Action Implementation Report
Don Warren Property
Donde, LLP
211 South Paterson Street
Madison, Wisconsin

April 2002

**Prepared For:** 

Donde, LLP c/o Warren Heating and Air Conditioning 916 Williamson Street Madison, Wisconsin 53703 Prepared By:

BT<sup>2</sup>, Inc. 2830 Dairy Drive Madison, Wisconsin 53718

### **Project #1952**

I, Samuel L. Cooke III, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E8, Wis. Adm. Code; and that to the best of my knowledge all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signatura

Principal / Seniar Chemical Engineer
Title and P.E. Number 5-27412

Stamp

I, Christopher H.V. Vahle, hereby certify that I am a hydrogeologist as the term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature

Siz. HyDROGEOLOGICS

Title

APRIL 11, 2002

Date

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### **EXECUTIVE SUMMARY**

Petroleum-contaminated soil was discovered at the Donde, LLP (Donde) property located at 211 South Paterson Street in Madison, Wisconsin, during a May 1999 geotechnical soil investigation. The property was being prepared for construction of a two-story office building. Nine Springs Environmental Consultants, Inc. (Nine Springs) was retained by Mr. Don Warren (Donde) to evaluate the petroleum contamination at the site.

Nine Springs supervised the completion of ten direct-push technology (DPT) soil borings during May 1999 and collected soil and groundwater samples from these DPT borings. Soil samples were reported with detectable concentrations of petroleum hydrocarbons in exceedance of the Wisconsin Department of Natural Resources (WDNR) NR 720 soil cleanup standards and in exceedance of the "Soil Cleanup Standards for Polycyclic Aromatic Hydrocarbons (PAHs), Interim Guidance," dated April 1997. Groundwater samples collected from the DPT borings also were reported with concentrations in exceedance of the WDNR enforcement standards (ES) and preventive action limits (PALs).

Based on these reported concentrations, Nine Springs discussed the results with Mr. Mike Schmoller (WDNR project manager), who stated that the WDNR would require that the petroleum-contaminated soil be remediated. Mr. Warren had plans to construct a two-story office building at the facility and wished to proceed with the project as quickly as possible. Nine Springs presented different options to Mr. Warren regarding possible remediation scenarios, costs for remediation, and potential reimbursement scenarios available under the Wisconsin Department of Commerce (Commerce) Petroleum Environmental Cleanup Fund Act (PECFA) program. Mr. Warren decided to continue with the building construction project by declaring the site a less than \$80,000 PECFA site in a letter to Commerce dated June 21, 1999.

Excavation of petroleum-contaminated soil that would have been located under the proposed building was excavated and stockpile onsite during June 1999. The soil was stockpiled on site in order to maintain the building construction schedule and allow Nine Springs time to secure a landspreading facility and WDNR approval for landspreading.

In August 1999 a landspreading workplan was submitted to the WDNR by Soil Treatment Technologies, Inc. (STT) and subsequently approved by the WDNR. In September 1999, Nine Springs supervised the transportation and landspreading of the stockpiled soil and additionally excavated petroleum-contaminated soil. A total of 2,787 tons (1,990.6 yd³) of petroleum-contaminated soil was landspread at two 2.5-acre facilities in Sun Prairie, Wisconsin. Landspreading Facility #1 accepted 1,688.6 tons

(1,206.1 yd³) of petroleum-contaminated soil and Landspreading Facility #2 accepted 1,098.4 tons (784.5 yd³) of petroleum-contaminated soil. Phase One of the remedial action excavation produced 1,322.3 tons (944.4 yd³) of petroleum-contaminated soil. Phase Two of the remedial action excavation produced 1,464.7 tons (1,046.2 yd³) of petroleum-contaminated soil.

Excavation confirmation soil samples were collected at the completion of each phase of the excavation. Phase One excavation confirmation soil samples were reported with concentrations of petroleum hydrocarbons below the WDNR cleanup standards. Phase Two excavation confirmation soil samples were reported with concentrations of petroleum hydrocarbons in exceedance of the WDNR cleanup standards in three of the five soil samples collected. One of the soil samples (SW-6'), that was reported with concentrations of polynuclear aromatic hydrocarbons (PAHs) in exceedance of the WDNR PAH Interim Guidance soil cleanup standards, was an estimated concentration due to the concentration falling between the level of detection (LOD) and level of quantification (LOQ). The remaining two samples (S2-6' and NW-6') were reported with WDNR soil cleanup exceedances. These samples were collected from the northeastern (NW-6') and southwestern (S2-6) portions of the excavation.

Four groundwater monitoring wells and one piezometer (MW-1 through MW-4 and PZ-1) were installed at the site in April 2001 and sampled in May 2001. The groundwater flow direction was determined to be towards the northwest at an approximate gradient of 0.03 ft/ft (150.9 ft/mile). Free product was measured in groundwater monitoring well MW-4 at a thickness of 0.40 feet. Groundwater sample analytical results reported WDNR ES exceedances in wells MW-1 and MW-4, with the exceedances being for PAH compounds.

### 1.0 INTRODUCTION

### 1.1 Purpose and Background

This Site Investigation and Remedial Action Implementation Report (SIRAIR) describes the site investigation and remedial action activities performed at the Donde, Don Warren Property located at 211 South Paterson Street in Madison, Wisconsin (Figure 1). The activities completed were undertaken at the request of the WDNR in response to the detection of petroleum hydrocarbons in the site soil during a geotechnical soil investigation completed in preparation of construction of a two-story office building. A brief historical survey of the property provided evidence of six aboveground storage tanks (ASTs), which appeared to have been operated by Shell Oil Company (Shell), having been located on the property. These ASTs were present on multiple Sanborn Insurance Maps dating from 1936 through 1984. Nine Springs was retained by Mr. Don Warren (Donde) to perform soil and groundwater sampling through DPT soil borings at the site after the geotechnical sampling indicated that petroleum hydrocarbons were present at the facility. In May 1999, Nine Springs supervised the advancement of ten DPT soil borings and collected soil and groundwater samples from the borings. Laboratory analyses of these samples indicated that petroleum hydrocarbons were present in the subsurface soils at concentrations that exceeded the WDNR residual contaminant levels (RCLs).

Due to the anticipated construction of a two-story office building on the property, Nine Springs, Mr. Mike Schmoller (WDNR), and Mr. Warren (Donde) discussed the course of action which would be required by the WDNR before closure could be issued for the soil contamination at the site. It was agreed that the petroleum hydrocarbon-impacted soil located at the site would have to be removed. The decision was made by Mr. Warren to pursue this project under the <\$80,000 PECFA program, as this would give Mr. Warren the greatest flexibility for completing the remedial action and still anticipate meeting the construction deadlines. Details regarding the site investigation and remedial action implementation are presented below.

### 1.2 Physiographic Setting

### 1.2.1 Topography and Physiography

The approximate site elevation is 850 feet above mean sea level (amsl). The subject site is relatively flat with a gentle slope towards the southwest, towards Paterson Street. The subject site sits on the isthmus between Lakes Mendota and Monona. The ground surface at the subject site is primarily an asphalt parking lot and two-story building with some landscaping planters separating parking areas (**Figure 2**).

### 1.2.2 Geology

The site is located on the isthmus, approximately 2,700 feet southeast of Lake Mendota and 1,700 feet northwest of Lake Monona at an approximate elevation of 850 feet amsl. During the Wisconsin glaciation, the area was a glacial lake bottom. This environment gave the site its characteristics of being flat and poorly drained (Mickelson, 1983).

The soil has been mapped as the Colwood Silt Loam. This soil is characterized by being poorly drained and formed under deep and alternating layers of calcareous lake laid silt and fine sands. The soil has moderate permeability. The top 10 inches is a black silt loam underlain by a 25-inch-thick subsoil consisting of grayish brown clay loam, olive-gray sandy clay loam, and light brownish gray loamy very fine sand (Glocker, 1978).

The near-surface soils are underlain by glacial lacustrine sediments, including fine grained silt and clay with some sand and some peat accumulation (Mickelson, 1983). These unconsolidated materials overlie bedrock, present at about 170 feet below ground surface (bgs). Local well logs obtained from the Wisconsin Geological and Natural History Survey indicate that the uppermost bedrock consists of sandstone.

During the DPT soil borings, excavations, and groundwater monitoring well installations, black granular fill material was observed across the site in the shallow subsurface soils, underlain by silty, clayey sand and sandy silts and clays.

### 1.2.3 Hydrogeology

The groundwater flow in the area is influenced by the nearby lakes and nearby municipal wells. Groundwater was found to be at depths of 6 to 8 feet bgs during the May 1999 and April 2001 DPT soil borings and groundwater monitoring well installations, as well as the June and September 1999 excavations. Groundwater flow direction at the site was expected to be towards the southeast to southwest, towards Lake Monona. However, depth to groundwater measurements and top of casing elevations were used to determine that groundwater flow direction is towards the west-northwest at an approximate gradient of 0.03 ft/ft (176 ft/mile).

### 2.0 SITE INVESTIGATION FIELD ACTIVITIES

This section presents the activities completed during the initial site investigation activities at the site. Site investigation activities were interrupted in order to perform site soil remediation prior to evaluating

groundwater in order to maintain the building construction schedule and to avoid incurring additional costs for groundwater monitoring well replacement activities.

### 2.1 Direct-Push Technology Soil Sampling and Laboratory Analysis

On May 27, 1999, Nine Springs supervised the advancement of ten DPT soil borings (NSB-1 through NSB-10) (**Figure 2**) by Soils and Engineering Services, Inc. (SES) of Madison, Wisconsin. The DPT borings were completed by driving a lined, 2-foot-long stainless steel sampling tube into the subsurface. Continuous sampling was conducted at each boring location and the borings were completed to depths ranging from eight to 12 feet bgs. Sampling equipment was decontaminated between each boring using a tap water and Alconox solution followed by a tap water rinse. Field screening of the soil was conducted using a photo-ionization detector (PID) at 2-foot intervals. Soil from each interval was placed in a sealable plastic bag and allowed to reach ambient temperature for approximately 15 minutes. Volatile organic vapors were measured within the headspace of the plastic bag after the 15 minutes. Documentation of the field-screening results is included on the soil boring logs included as **Appendix C**. Soil boring logs also provide descriptions of the soil type, color, odor and moisture content and a Unified Soil Classification System (USCS) designation.

Soil samples were collected from the depth exhibiting the highest PID reading and from within the vadose zone. Each soil sample was transferred to laboratory-supplied glassware, properly weighed and/or preserved, labeled, and placed in a cooler on ice for transport to USFilter for laboratory analysis. Each sample was analyzed for gasoline range organics (GRO), diesel range organics (DRO), volatile organic compounds (VOCs), and PAHs. A copy of the laboratory report and chain-of-custody documentation for these samples is presented in **Appendix D**.

### 2.2 Direct-Push Technology Groundwater Sampling and Analysis

Nine Springs supervised the collection of five groundwater samples from five of the DPT soil borings. The groundwater samples were collected from borings NSB-1, NSB-3, NSB-6, NSB-8, and NSB-9 (Figure 2). A temporary polyvinyl chloride (PVC) well screen and blank was inserted into each soil boring where groundwater was to be collected. A small PVC bailer was used to retrieve the groundwater sample from each temporary well. The groundwater was decanted into properly preserved, laboratory-supplied glassware, labeled, and immediately place on ice in a cooler for transportation to USFilter for laboratory analysis. Each sample was analyzed for VOCs and PAHs by USFilter. A copy of the laboratory report and chain-of-custody documentation for these samples is included as **Appendix D**.

### 2.3 Borehole Abandonment and Documentation

Nine Springs supervised the proper abandonment of the soil borings by SES upon completion of all soil/groundwater sampling activities. Boreholes were abandoned by filling the hole with granular bentonite. The bentonite was then hydrated with potable water and the surface material replaced. Copies of the WDNR Form 3300-5B, Well/Drillhole/Borehole Abandonment forms are included as **Appendix C**.

2.4 Groundwater Monitoring Well Installation/Development/Sampling and Laboratory Analysis BT² supervised the installation of four groundwater monitoring wells (MW-1 through MW-4) and one piezometer (PZ-1) by Badger State Drilling, Inc. (BSD) on April 9, 2001 (Figure 2). The wells were installed using hollow-stem auger (HSA) drilling techniques. The groundwater monitoring wells were installed to a depth of approximately 15 feet bgs. The wells were constructed using a 10-foot section of 2-inch diameter, 0.010-inch slot-size PVC well screen and a 5-foot section of blank casing material. Piezometer PZ-1 was completed to a depth of 30 feet bgs using a 5-foot section of 0.010-inch slot sized screen and 25 feet of blank 2-inch PVC well casing material. Wells MW-1, MW-2, MW-4, and PZ-1 were completed with a flush-mounted, traffic-rated, steel well box surrounded by concrete. Well MW-3 was completed with a steel stick-up protective cover. Each well is fitted with an expandable locking well plug and lock.

Each well was developed immediately following installation by surging with a bailer and purging with a submersible electric pump, with the exception of well MW-4. Well MW-4 was developed on May 2, 2001 by surging with a bailer and purging with a bailer. Free product was present prior to purging well MW-4 at a thickness of 0.40 feet. All wells purged dry and each well was purged dry a minimum of two times. All purge water was containerized on site in 55-gallon Department of Transportation (DOT)-approved steel drums. Copies of the well development forms are included as **Appendix E**.

On May 2, 2001, BT<sup>2</sup> personnel performed a groundwater monitoring and sampling event at the subject site. Depth to water was measured in each well and groundwater elevations were calculated from these measurements. A minimum of three well casing volumes of groundwater was purged from the well using a dedicated PVC bailer prior to sampling. Samples were retrieved using the dedicated bailer and a precleaned bottom emptying device (BED) was used to decant the groundwater into the appropriate laboratory-supplied glassware. The samples were then properly labeled and placed on ice in a cooler for transport to Commonwealth Technology, Inc. (CTI) for laboratory analysis. Each sample was submitted for analysis of GRO, DRO, VOC, PAH, and dissolved lead. Copies of the laboratory report and chain-of-custody documentation are included as **Appendix F**.

### 3.0 REMEDIAL ACTION EXCAVATION AND LANDSPREADING ACTIVITIES

This section presents the activities completed for the remedial action excavation conducted during June and September 1999. The remedial action excavation was completed in two phases in order to assist meeting building construction deadlines and in order to allow time to secure approval for landspreading of the contaminated soil. A total of 1,990.6 yd³ (2,787 tons) was excavated from the site and landspread at two separate WDNR-approved landspreading facilities.

### 3.1 Phase One Remedial Action Excavation, Stockpiling, and Backfilling Activities

The remedial action excavation Phase One activities were supervised by Nine Springs between June 29 and July 5, 1999. Popp Excavating, Inc. (Popp) performed the excavation activities at the site. A total of 944.4 yd³ (1,322.3 tons) of contaminated soil was excavated and stockpile on plastic at the site. The stockpiled soil was then covered with plastic pending disposal at an approved landspreading facility. The stockpiled soil was not transported off site therefore no weights or load tickets were collected for this material at this time.

Phase One of the excavation was completed under the proposed footprint of the building (**Figure 3**) in order to facilitate the completion of the building construction. The excavation was completed to a depth of approximately 8 feet bgs. Groundwater was encountered at approximately 6.5 feet bgs.

After the excavation was completed, a total of five confirmation soil samples were collected (**Figures 3** and **5**). The samples were submitted to USFilter for analysis of total lead, GRO, DRO, PAHs, and petroleum volatile organic compounds (PVOCs). A copy of the laboratory report and chain-of-custody documentation is included as **Appendix G**.

On July 2, 2001, Nine Springs was contacted, prior to backfilling activities, to address the presence of groundwater and free product in the excavation base. Free product and a free product sheen was observed in the northeast portion of the excavation. Nine Springs contacted Eckmayer, Inc. (Eckmayer) to vacuum the water and free product from the excavation and transport the material to the Madison Metropolitan Sewage District (MMSD) for disposal. A total of 4,500 gallons of water/product was disposed of by Eckmayer at MMSD. The excavation was then backfilled by installing a layer of filter fabric on top of the native soil, placing 3-inch breaker run rock material on top of the filter fabric, and then covering the rock with another layer of filter fabric. The remainder of the excavation was backfilled and compacted with pit run sand.

As Popp was excavating the remainder of the building foundation/footing area, an area of multiple layers of railroad ties installed horizontally and perpendicular to one another was encountered. The railroad ties were coated with a thick, black, oil-like substance. Contractors at the site indicated that this was a typical construction method for road bases in the early development of Madison, when roads were being constructed in soft marsh land. Popp attempted to dispose of this material at the Waste Management (WM) Madison Prairie Landfill as construction debris; however, WM rejected this material as construction debris but would accept it at the biopile for remediation. Rather than transport the material back to Madison, Mr. Warren and Popp agreed to dispose of the material at the biopile. A total of two truckloads of material totaling 42.94 tons was disposed of at the Madison Prairie biopile on July 7, 1999. After this material was rejected by the landfill, any other contaminated soil was placed on the onsite contaminated soil stockpile for future landspreading disposal.

### 3.2 Phase Two Remedial Action Excavation and Backfilling Activities

In August 1999, Soil Treatment Technologies, Inc. (STT) prepared a Landspreading Workplan for two separate 2.5-acre landspreading facilities located in Sun Prairie, Wisconsin. A copy of the Landspreading Workplan and subsequent WDNR approval letter is included as **Appendix B**.

On September 14 through 16, 1999, Nine Springs supervised the removal of the stockpiled soil generated from Phase One of the remedial action excavation (944.4 yd³ or 1,322.3 tons) and the additional excavation of approximately 1,046.2 yd³ (1,464.7 tons) of contaminated soil from the site. The excavation was completed to an approximate depth of 8 feet bgs and groundwater was encountered at approximately 6.5 feet bgs.

In order to determine the amount of soil excavated from the subject site, random truckloads of contaminated soil were directed to the R. G. Huston Co., Inc. scale located in Cottage Grove, Wisconsin. A total of 135 loads of contaminated material was transported to the landspreading facilities in Sun Prairie, Wisconsin. Of these, 48 loads were weighed at a certified scale on their way to the Sun Prairie landspreading facilities. The average weight of the loads was calculated on a daily basis in order to guide the landspreading activities. The total number of loads per day was multiplied by the average weight of the loads in order to estimate the total amount of contaminated soil excavated, transported, and landspread. A copy of the weight tickets and manifest tickets are included as **Appendix H**. On September 16, 1999, Nine Springs collected five confirmation soil samples from the excavation sidewalls and submitted them to USFilter for analysis of total lead, GRO, DRO, PVOCs, and PAHs. A copy of the laboratory report and chain-of-custody documentation is included as **Appendix G**.

### 3.3 Landspreading Methodologies and Field Activities

As stated in Section 3.2, STT submitted a Landspreading Workplan to the WDNR on August 19, 1999. The landspreading application was completed for two single-application facilities, each being 2.5 acres in size. A copy of the STT Landspreading Workplan and subsequent WDNR approval is included as **Appendix B**.

The total weight of petroleum contaminants (combined GRO and DRO) to be landspread at the two facilities was estimated at 11,280 pounds, based on an estimated total of 2,400 yd³ of petroleum-contaminated soil. Facility #1 was estimated for 5,997 pounds (1,276 yd³) of total petroleum hydrocarbons (GRO and DRO combined) and Facility #2 was estimated for 5,283 pounds (1,124 yd³) total petroleum hydrocarbons. The total weight of benzene estimated to be spread at Facility #1 was 3.8 pounds and at Facility #2 was 3.4 pounds. A maximum spread rate of 4 inches per acre, equaling 540 yd³ of contaminated soil per acre, was used to comply with mass loading limits. It was calculated that this application thickness would yield 2,538 pounds of total hydrocarbons per acre, which is below the 3,000 pounds per acre maximum as established by the WDNR. The total amount of benzene to be spread at both facilities was calculated to be 7.2 pounds, which is well below the WDNR maximum of 300 pounds per landspreading site. Calculations determining these mass loading limits were provided in the STT Landspreading Workplan, a copy of which is included as **Appendix B**.

On September 14 through 16, 1999, STT personnel supervised the landspreading of contaminated soil at the landspreading facilities. Single truckload size piles of contaminated soil were deposited in specific areas of the landspreading facility and spread to the 4-inch maximum thickness by a bulldozer. STT personnel collected the weight tickets from the trucks as the loads were deposited at the site and determined the area that the contaminated soil was to be spread by the bulldozer. Bulldozer landspreading and subsequent rock-picking activities were completed by Popp personnel. A total of 1,206.1 yd³ (1,688.6 tons) of contaminated soil was landspread at Facility #1. A total of 784.5 yd³ (1,098.5 tons) was landspread at facility #2.

### 4.0 SITE INVESTIGATION RESULTS

### 4.1 DPT Soil Sample Analytical Results

Ten soil samples were collected from the vadose zone in ten soil borings (NSB-1 through NSB-10). The location of the soil borings is presented on **Figure 2**. The soil samples were analyzed for GRO, DRO,

VOCs, and PAHs. Each sample was collected from a depth of 6 feet bgs or 7 feet bgs. The laboratory results were compared to the Wisconsin Administrative Code (WAC) Chapter NR 720 Soil Cleanup Standards and the WDNR Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance document dated April 1997 (Interim Guidance). The most stringent Cleanup Standards were used for comparison.

Soil cleanup standard exceedances were reported for GRO, DRO, benzene, naphthalene, benzo(a)anthracene, benzo(b)flouranthene, benzo(a)pyrene, dibenzo(ah)anthracene, indeno(cd)pyrene, and phenanthrene. The exceedances were reported in all the soil samples with the exception of NSB-7(6') and NSB-9(6'). The chromatogram for the GRO and DRO analyses for samples collected from NSB-1 through NSB-5 were reported by the analytical laboratory to have characteristics of fuel oil and not as gasoline or diesel fuel. The chromatogram for the sample collected from NSB-6 was reported as having a pattern indicative of a petroleum hydrocarbon heavier than diesel, such as motor oil or hydraulic oil. The sample collected from NSB-10 was reported as not being characteristic for diesel fuel with a raised baseline outside of the DRO window. A summary of the laboratory results and the WDNR soil cleanup standard exceedances are presented in **Table 1**. A copy of the laboratory report and chain-of-custody documentation is included in **Appendix D**.

### 4.2 DPT Groundwater Sample Analytical Results

A total of five groundwater samples were collected from soil borings NSB-1, NSB-3, NSB-6, NSB-8, and NSB-9. The groundwater samples were submitted for analysis of VOCs and PAHs. The reported results were compared with the WAC Chapter NR 140 PALs and ES. In addition, the proposed ES and PAL standards from the Interim Guidance was used for comparison for the PAH compound acenaphthylene.

Results indicated that ES exceedances were detected in the groundwater samples from NSB-1 (naphthalene, benzo(b)fluoranthene, and chrysene), NSB-3 (naphthalene, in both the VOC and PAH analysis methodologies), NSB-6 (chrysene), NSB-8 (naphthalene), and NSB-9 (benzo(a)pyrene, benzo(b)fluoranthene, and chrysene). In addition, a PAL exceedance was reported for benzo(a)pyrene in the sample collected from NSB-1. A summary of laboratory results and ES and PAL exceedances is presented as **Table 2**. A copy of the laboratory report and chain-of-custody documentation is included as **Appendix D**.

### 4.3 Groundwater Elevations and Flow Direction

 $\mathrm{BT}^2$  surveyed the wells and piezometer into a benchmark established at a fire hydrant located close to the site. The average depth to groundwater at the site was 10.45 feet bgs. The groundwater flow direction

was found to be to the northwest at an approximate gradient of 0.03 ft/ft (150.9 ft/mile). Groundwater elevation contours for the May 2, 2001 groundwater measurement event is presented on **Figure 6**. Free product was measured in well MW-4 with a thickness of 0.40 feet on May 2, 2001. No other wells had measurable free product present on May 2, 2001. Free product in MW-4 was subsequently measured on September 7, 2001 to be 0.54 feet. A summary of free product thickness' and groundwater elevation data is presented in **Table 4**.

### 4.5 Groundwater Monitoring Well Sample Analytical Results

BT<sup>2</sup> collected groundwater monitoring well samples on May 2, 2001. Each well was purged of a minimum of three well casing volumes prior to sampling. The groundwater samples were submitted for analysis of DRO, GRO, dissolved lead, VOCs, and PAHs. Naphthalene was reported above the WDNR ES for the VOC scan in wells MW-1 and MW-4. Well MW-1 was reported with WDNR ES exceedances for acenaphthylene, chrysene, fluoranthene, naphthalene (PAH scan), and pyrene. Well MW-4 was reported with WDNR ES exceedances for fluoranthene, fluorene, and pyrene. No other WDNR ES exceedances were reported from any other wells sampled. WDNR PAL exceedances were reported for total trimethylbenzenes, benzene, and fluorene in well MW-1. Well MW-3 was reported with a WDNR PAL exceedance for chloromethane. No other WDNR PAL exceedances were reported in any of the wells sampled. A summary of the groundwater monitoring well analytical data is presented in **Table 5**. A copy of the laboratory report and chain-of-custody documentation is included as **Appendix F**. The groundwater monitoring well sample analytical data is presented on **Figure 7**.

### 5.0 REMEDIAL ACTION EXCAVATION AND LANDSPREADING FACILITIES CONFIRMATION SOIL SAMPLING RESULTS

### 5.1 Phase One Remedial Action Excavation Confirmation Sample Results

Five confirmation soil samples were collected by Nine Springs personnel on June 29 and 30, 1999. The samples were collected from areas indicated on **Figure 3** and **Figure 5**. The samples were identified as NE-6', N-6', E-6', SE-6', and S-6'. The samples were collected from the sidewalls of the excavation from within the vadose zone at an approximate depth of 6 feet bgs. Each sample was analyzed for GRO, DRO, and VOCs, PAHs, and total lead. The samples were reported with total lead concentrations ranging from 1.47 milligrams per kilogram (mg/kg) or parts per million (ppm) to 4.09 mg/kg. A concentration of DRO was reported for sample NE-6' with a concentration of 9.16 mg/kg. The laboratory reported that the chromatogram for this sample was characteristic for fuel oil/diesel #1 or #2, jet fuel, kerosene, and aged or degraded diesel. No other excavation confirmation soil samples were reported with a detected GRO or

DRO concentration. Toluene was reported in sample NE-6' and MTBE was reported in samples N-6' and S-6'. Sample NE-6' was also reported with detectable concentrations of anthracene, fluorene, 1-methylnaphthalene, 2-methylnaphthalene, and phenanthrene. Sample SE-6' was reported with detectable concentrations of benzo(a)pyrene, benzo(a)fluoranthene, and fluorene. No other detectable concentrations were reported for any of the excavation confirmation soil samples. The concentrations reported did not exceed any of the NR720 or PAH Interim Guidance soil cleanup standards. The results of the laboratory analyses are presented in **Table 3**. A copy of the laboratory report and chain-of-custody documentation is included as **Appendix G**.

The soil sample collected from the "clean" overburden soil stockpile (Clean Stockpile) was analyzed for PVOCs and PAHs. All PVOC constituents were reported with detectable concentrations in the Clean Stockpile soil sample. The benzene concentration exceeded the NR 720 Table 1 soil cleanup concentration levels.

### 5.2 Phase Two Remedial Action Excavation Confirmation Sample Results

Five confirmation soil samples were collected by Nine Springs personnel on September 16, 1999. The samples were collected from areas indicated on **Figure 4** and **Figure 5**. The samples were identified as S2-6', SW-6' W-6', W2-6', and NW-6'. The samples were collected from the sidewalls of the excavation from within the vadose zone at an approximate depth of 6 feet bgs. Each sample was analyzed for GRO, DRO, VOCs, and PAHs. Sample NW-6' was reported with a GRO concentration of 165 mg/kg. This concentration exceeds the WDNR NR 720 soil cleanup standard of 100 mg/kg. No other samples reported detectable concentrations of GRO. DRO was reported in samples S2-6', W2-6', W-6', and NW-6' at concentrations of 12.9 mg/kg, 17.3 mg/kg, 35 mg/kg, and 376 mg/kg, respectively. The concentration of DRO in NW-6' exceeded the NR 720 soil cleanup standard of 100 mg/kg. The reported concentrations of benzo(a)pyrene and dibenzo(a,h)anthracene in S2-6' exceeded the PAH Interim Guidance soil cleanup standards for the direct-contact: non-industrial pathway. Other PAH analytes were reported above laboratory detection limits; however, none of these reported concentrations exceeded any of the WDNR soil cleanup standards.

Sample SW-6' reported benzo(a)pyrene and dibenzo(a,h)anthracene at concentrations of 0.0091 mg/kg and 0.00885 mg/kg, respectively. These concentrations exceeded the PAH Interim Guidance soil cleanup standards for the direct-contact: non-industrial pathway. The concentrations of benzo(a)pyrene and dibenzo(a,h,)anthracene were reported by the laboratory as estimated concentrations due to the concentration falling between the LOD and LOQ. Other PAH analytes were reported above laboratory

detection limits; however, none of these reported concentrations exceeded any of the WDNR soil cleanup standards.

Detectable concentrations of ethylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, acenaphthene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chrysene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene were reported in the samples; however, none of the detectable concentrations exceeded the WDNR NR 720 or PAH Interim Guidance soil cleanup standards.

A summary of the analytical results is presented in **Table 3**. A copy of the laboratory report and chain-of-custody documentation is included in **Appendix G**.

### 5.3 STT Landspreading Facilities Confirmation Soil Sampling Results

On June 23, 2001, STT personnel completed confirmation soil sampling activities at the two landspreading facilities. A total of 12 sampling points were established at landspreading Facility No. 1 with two samples collected from each point from depths of four to six inches bgs and two to three feet bgs. Each sample was submitted to US Filter for analysis of DRO, GRO, PVOCs, and PAHs. Eight of the 24 soil samples were reported with concentrations of DRO and/or PAHs which exceeded the WDNR residual contaminant levels (RCLs).

A total of seven sampling points were established at landspreading Facility No. 2 with two samples collected from each point from depths of four to six inches bgs and two to three feet bgs. Each sample was submitted to US Filter for analysis of DRO, GRO, PVOCs, and PAHs. Six of the 14 soil samples were reported with concentrations of DRO and/or PAHs which exceeded the WDNR RCLs.

A copy of the STT report submitted to the WDNR on November 22, 2001 is included as Appendix I.

### 6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the site investigation and remedial action excavation activities, the following conclusions have been made:

- Petroleum-contaminated soil was discovered at the site during a geotechnical investigation. Nine Springs supervised the completion of ten DPT soil borings and collected soil samples and groundwater samples from the DPT soil borings in May 1999.
- Analytical results of the soil samples reported WDNR NR 720 and PAH Interim Guidance soil cleanup standard exceedances at the site. Soil sample NSB-4(6') had a DRO result of 8,450 mg/kg and naphthalene of 14,530  $\mu$ g/kg, for example.
- In order to maintain building construction deadlines, the site was declared a less than \$80,000 PECFA site by the property owner.
- Nine Springs supervised the first phase of contaminated soil excavation at the site in June 1999. The amount of soil removed during Phase One of the remedial action excavation was not estimated at that time in order to reduce costs associated with hauling the material from the site to a scale and back. The soil was stockpiled on site until landspreading facilities could be acquired and a landspreading application could be approved by the WDNR.
- Construction activities at the site during July 1999 resulted in an additional 42.94 tons of petroleum-contaminated soil being disposed of at the WM Madison Prairie Biopile.
- In August 1999, a landspreading workplan was prepared by STT and approved by the WDNR. The landspreading workplan established two landspreading facilities each being 2.5 acres in size (Landspreading Facility #1 and Landspreading Facility #2).
- In September 1999, Phase Two of the remedial action excavation was conducted at the site. In addition, the stockpiled soil from Phase One of the remedial action excavation was transported to the approved landspreading facilities.
- A total of 2,787 tons (1,990.6 yd³) of petroleum-contaminated soil was excavated and disposed of at the landspreading facilities. Landspreading Facility #1 received a total of 1,688.6 tons (1,206.1 yd³) and Landspreading Facility #2 received a total of 1098.4 tons (784.5 yd³).
- A total of 4,500 gallons of petroleum-contaminated water was transported by Eckmayer to MMSD treatment facility as a result of excavation dewatering activities.
- The confirmation soil sample, NW-6', collected from the Phase Two remedial action excavation, reported GRO and DRO concentrations exceeding the WDNR NR 720 soil cleanup standards.
- The confirmation soil samples, S2-6' and SW-6', collected from the Phase Two remedial action excavation, reported concentrations of benzo(a)pyrene and dibenzo(a,h)anthracene exceeding the PAH Interim Guidance, direct-contact: non-industrial pathway soil cleanup standard. The concentrations in SW-6' were reported as estimated concentrations due to the concentration falling between the LOD and LOQ.
- STT collected a total of 38 soil samples from the two landspreading facilities in June 2001. The samples were submitted to US Filter for analysis of GRO, DRO, PVOCs, and PAHs. A total of

14 of the 38 samples were reported with concentrations of DRO and/or PAHs which exceeded their respective RCLs.

- In April 2001, BT<sup>2</sup> supervised the installation of four groundwater monitoring wells and one piezometer at the site. Free product was measured at a thickness of 0.40 feet in well MW-4. No product was measured in any other monitoring well or piezometer at the site.
- Groundwater was calculated to flow towards the northwest at an approximate gradient of 0.03 ft/ft (150.9 ft/mile) on May 2, 2001.
- Groundwater samples collected on May 2, 2001 reported concentrations of PAH petroleum constituents in wells MW-1 and MW-4 that exceed the WDNR ES.
- Free product was measured with a thickness of 0.54 feet on September 7, 2001 in MW-4.

Prior to any further work being conducted, BT<sup>2</sup> and Mr. Warren request a meeting to discuss the site issues. Mr. Warren has information regarding background contamination present surrounding his property. Mr. Warren would like to have closure of the site be considered now; however, during our meeting we can discuss the following issues and possible future activities:

- Soil contamination that is present in the northeastern and southwestern portion of the Phase Two
  remedial action excavation (soil samples NW-6' and S2-6') should be documented in the form of
  a deed restriction or in the WDNR Geographic Information System (GIS) database.
- Soil contamination present in the west-southwestern portion of the excavation (SW-6') exceeds the WDNR PAH Guidance cleanup level; however, due to the sample being collected from a depth of 6 feet bgs, there does not appear to be a direct contact threat for this soil. In addition, the surface of the area surrounding SW-6' is now asphalt parking lot and is acting as an engineered control for reducing the potential for direct contact exposure.
- As indicated in the November 2001 STT report, additional confirmation soil samples should be collected from the two landspreading facilities. Only those locations identified as having exceeded the RCL requirement will be sampled. It is recommended that the samples be collected in the Fall of 2002.
- Free product removal from well MW-4 can be initiated. The free product removal activities would either be completed by the owner or BT<sup>2</sup>. If the owner decides to conduct the free product removal, then BT<sup>2</sup> will train the owner in proper removal techniques and documentation. Free product would be stored on site until a sufficient volume has been collected for cost-effective disposal to be arranged. The WDNR would be provided with reports on a quarterly basis documenting the free product removal and disposal activities.

- A sample of the free product could be obtained and submitted to a laboratory for analysis of VOCs and PAHs. In addition, characterization of the free product could be attempted in order to determine the age and/or type of product present in monitoring well MW-4.
- Additional groundwater monitoring well(s) could be installed downgradient of MW-1 and MW-4
  to delineate the extent of groundwater contamination. This may require installation of off site
  monitoring wells to the northwest of MW-1 and MW-4.
- Groundwater could be monitored for two additional quarters and the results reported to the WDNR after the second sampling event.
- Additional evaluation of the results could be provided after the quarterly groundwater sampling activities are completed (e.g., need for downgradient monitoring wells).

Please call us to discuss setting up a meeting where the above issues can be discussed between Mr. Warren,  $\mathrm{BT}^2$  and you.

### **TABLES**

1	Direct-Push Technology Soil Samples Analytical Results
2	Direct-Push Technology Groundwater Samples Analytical Results
3	Excavation Confirmation Soil Samples Analytical Results
4	Historical Groundwater Elevation Data
5	Groundwater Monitoring Well Samples Analytical Results

## TABLE 1 DIRECT - PUSH TECHNOLOGY SOIL SAMPLES ANALYTICAL RESULTS

Donde, LLP
Don Warren Property
211 South Paterson Street
Madison, Wisconsin
BT<sup>2</sup> Project #1952

Sample I D	/ 231													
Date Collected	N35-1	NSB-2	NSB-3	NSB-4	NSB-5	NSB-6	L	Nep o						
Sample Depth (ft bgs)	03/2//89	05/27/99	05/27/99	05/27/99	-	1-	05/27/99	05/27/99	NSB-9	NSB-10	WDNR	NR 746.06	NR 746.06	<b>P</b>
PID	587	, 500	٩	٥	9	┼-	丄	9	8817760	05/2//89	Cleanup Standards**	Table 1	Table 2	
Total Lead (mg/kg)	100	3,226	4,218	2,914	37.8	37.4	0.0	12.4	, ,	٥		Free Product Indicator	Direct Contact Standard	_
GRO (motes)	0.03	1.83	90.1	37	35.3	!			673	0.0	1	,		-
(Sydin) Octo	478	540	327	501	263	22.3	100		?	5/.3	20	1	**	-
Volatile Omeric C	4,220	4,600	2,280	8.450	1 040	200	- i	\$6.1	<7.7	7.16	90			-
Volatile O'gaine Compounds (VOCs) (µg/kg)					2	507	<6.1	7.75	<7.7>	224	100	-	***	
Велгепе	<b>29</b> >	<117	232	- 0000	757								I	
Einylbanzana	<125	<234	1.396	2450	1000	67,0	434	<30	×38	<27	sc.	0		
lowene	<125	<234	<247	2450	1,400	9	33	<30	<38	31	2 900	000'9	1,100	
O-Kylene & Styrene	<125	<234	1335	2450	C1,143	429	Ş	<30	×38.	4	1 500	4,600		
m- & p-Xylenes	506	444	1024	B	21,743	429	34	<30	<38 <	100	006,1	38,00	•	
MISE	<125	<234	1700	2450	51,143	8	<31	<30	88	53	***			
	1,463	2 984	1700	250	2	135	104*	155*	176*	115*	001,4	42,000	1	
Isopropylbenzene	<125	4.164	100	1,410	<1,143	120	<31	330	438	9			ı	
Naphthalene	12 634	24 500	12.25	4459	<1,143	<29	31	30	850	100	•	11,000	*	
п-Рторубендене	100	34,300	17,/31	14,530	6,127	<29	<31	۶	3 8			-	449	
n-Buty/benzene	2020	2,000	2,782	2,148	1,374	116	33	230	900	8	400	2,700	***	_
1,2,4-Trimethylbenzene	0,0,0	20,386	11,564	<459	3,550	<29	1	1	900	43			-	
sec-But/lbenzene	637	45,7	<247	4,533	3,219	429	25	36	3	20	1			_
tert-Burkhenzene	4,327	13,302	8,160	4,576	3,507	384		200	88	45	ı	83.000		_
D-landralian	<125	5,609	5,182	1.823	<1143	1	7	3	88 V	85				
Polynicias Aromete trade	<125	<234	5,182	<459	<1 143	2 6	5	80	<38	427	1			
Charles Alument nydrocarbons (PAHS) (µg/kg)					21,1	87	3	33	<38	<27	1			
Acenaphthene	<3.6	<34.0	369	248	700			_						
Actingyiene	<1.2	<12	<12	1	3	44.0	<3.5	<3.5	4.4	33.9	38 000			
Muracene	2	37	<3.9	123			<1.2	<1.2	<1.5	4.1	700	1		
Benzo(a)anthracene	<1.7	×16	1,50			43.7	<3.9	<3.9	6.45	8	3 000 000		Name .	_
Benzo(b)fluoranthene	25.5	2		917	41.6	4.6	3.63	6.52	4.89	190	-	-		
Benzo(k)fluoranthene	27.2		7	428	131	<2.7	11.0	18.4	63	345	8 8	1	1	
Велхо(а)рутеле	30.5	97	2	<28	129	<2.7	3.69	8.15	4 P	3 =	88	1	1	
Benzo(ghi)perylene	20.2	7	7	<47	114	16.5		11.4	8 73	300	000	-	1	
Chrysene	0	7 000	7	18	86.9	13.1	12.0	17.0	24 p	200	8.8	ı	ı	
Dibenzo(ah)anthracene	25.6		1	818	41.8	<1.8	-	17.3	6.65	19	1,800		1	
Fluoranthene	200	05/0	42	-	6.6	3.9	L	$\mid$	643	1	008'9	-		
Fluorene	400	200	<32	<30	8	₽	23.8	56.8	45.9	7#7	8.8			
Indeno(1,2,3-cd)pyrene	777	35,	2,360	+	1,840	278	+	1	14:4	979	200,000			
Nanhthaine	C.1.2	130	<3.5		92	12.4	+	+		42.5	100,000	**	-	
Discout	35.7	√14 √14	108	2,740	129	414	+	+	0.35	077	88			
ritellariumene	5,230	2,350	3,660	$\vdash$	+		+	+	<1.8	30.9	400	2.700		
1-Methylacock	<4.6	<43	<4.6	+	+	+	$\dashv$	$\dashv$	30.5	488	1.800			
	586	9,240	5,930	10.300	+	24.5	7.41	21.5	<5.7	174	500.000			
Actes.	<5.4	8,850	ğ	+	+	+	+		<5.7	35.7	23.000	1	1	
				-	-	_		L	997	1	2000		1	

NOTES:
Clean Description of General set by the WONR and found in NR 720 or in the litterin Guidance for Soil Geerup Lanet for PAHs, dated April 1997.

- The Clean Description of General Standards in the most stringent lanet in the most stringent lanet in used for comparison of sech PAH compound. The interin Guidance for PAHs provides the methyl teritary buryl enters to be not compound. The interin Guidance for PAHs provides the methyl teritary buryl enters.

- The Clean Description detector.

- The Comparison of Section 1997.

- The Co

Page 1 of 1

# TABLE 2 DIRECT - PUSH TECHNOLOGY GROUNDWATER SAMPLE ANALYTICAL RESULTS

Donde, LLP Don Warren Property 211 South Paterson Street Madison, Wisconsin BT<sup>2</sup> Project #1952

		Pyrene		T	0.656	7	<33.0	7	3.78	Ī	T.	T	9.46		,	=
				╂		-		4		+		+	0.916	-	ŀ	200
		enendhaaned9		1	4  8:	1	1210	-	8 2.53	+	9.18	+	- e	_	L	•
		eneisrifiqelj	_	╂	- 6.0	+	728	-	\$0.0 <del>8</del>	1	8	- 1	0.385	_	97	2
		enelaritriqaniyriteli	-z	Š	70		2,710		40.08	ľ	<del>8</del> .		0.2(		,	
	(ma/L)	enelsztirkaniynisemene	٠,	9 06	8		3,180		89.	8	0.08	9770	2		ł	
	s (PAHs)	enevyq(bɔ-ɛ,2,1)onet	ЭUĮ	9000	200		<21.0		40.07	20.02	70.02	0 435	3		ı	
	drocarbor	Fluorene		<0.00		9	900	18	 ∂;	2 30	ŝ	20.02	}		904	
	Polynuciear Aromatic Hydrocarbons (PAHs) (ug/L	enertinariou(1		0.727	i	;	9	1	ç.	88	}	0.983			400	
	clear Aro	Суидзене		0.293		748.0	?	26.4	<u> </u>	888		0.416			0.2	
	Polyni	Benzo(ghl)perylene		0.128		0.8 A	2	80,00	3	40.08		0.164	_	-	-	l
		enedinatoufi(d)osna6		0.248		<12.0		8	_	8.0		0.347			2.0	
		enetyq(a)ozne6	-	0.187 0		<12.0		800		40.05		0.274 0		5	-	
The second		Benzo(a)anthracene	-1	0.135 0		<15.0		9.05		<0.05	7	0.171 0			1	_
		Acenaphthylene	┪	<u>6</u>	-	<30.0		40.1 A	$\dashv$	<u>6</u> .	┪	0.128 0		-		
L		o seuelyX	╀	5.5	1	<100	•	<0.5		5.5	+	0.5 0.5	_	_	l	-
		д+m <b>sene</b> tyX	╂	<del>-</del>	+	95		0.5	$\dashv$	5.5	+		_	10,000		8
		eneznediyibenihT-č,£,†	╂	9	+	8		\$0.5	+	 27 	+	v 		_	L	-
		eneznediyriteminT-Þ,S,f	╀	, ,	+	3	+	5.05	+	9	777			480	9	8
		eneuloT	205		+	3	+		1		6			1,000	Š	3
Volatile Organic Compounds (VOCs) (µg/L)		n-Propylbenzene	5.50		28.2	_	1	C	na s		20.5	}	1		-	
OA) spun	-	enelsdifiqsM	58.1		1 700	3	- 00	_	52.4		0.5			0	8	
к Сотро	-	eneulojýtorquene	42.5	-	163	_	ě		13.4		30.5		-		1	
atile Organ		kopropybenzene	5.01		251	_	0.754		25		\$0.5			-		
۸٥		Ethylbenzene	<2.5		20 20 20 20 20 20 20 20 20 20 20 20 20 2		905		<2.5		<0.5		282		140	
	-	enezueqiAng-)	2.5		177		0.769		<2.5		20.5		-	-	1	
		e-Butylbenzene	<2.5		488		4.14		30.2		<0,5		<del>ا</del> ,			
		eneznedlýfu8-n	98.8		384		2.31		28.4		<0.5		-			
		Benzene	0,0		<del>3</del>		€0.2		41.0		40.5		9	9 -		
1		Dzto	05/27/89		05/27/89		05/27/89		05/27/89	+	05/27/99					
				+		-				+		H	ES	Æ		
L		Sample ID	-Sec		792		NSB-6		NSB-6		P RSB-P					

Notes:
Refer to the laboratory analytical report for laboratory comments regarding these samples.
ES × Enforcement Standard (es per WIDNR NR 140).
PAL = Preventive Action Limit (as per WIDNR NR 140).

= No ES or PAL established.

Italic = PAL exceedance.

Bold = ES exceedance.

PAHs and VOcs not laited were below detection limits in all samples.

### EXCAVATION CONFIRMATION SOIL SAMPLES ANALYTICAL RESULTS **TABLE 3**

211 South Paterson Street Don Warren Property Madison, Wisconsin BT<sup>2</sup> Project #1952 Donde, LLP

			Excavatio	Excavation No. 1 Samples	nles				ļ			
Sample ID	NE-6'	.9-N	F.6'	SE 6'		- 3	1	Excav	Excavation No. 2 Samples	Samples		
Date Sampled	6/53/99	6/56/9	6/20/00	6/30/00	0-0	Clean Stockpile	4	.9-MS	W2-6'	.9-M	.9-MN	WDNR
Sample Denth (ft hos)	200	2000	0153133	0/30/38	66/06/9	66/36/9	9/16/99	9/16/99	9/16/99	9/16/99	0/16/90	1111111
PID (nom)	707		۵	و	9	1	9	9	9	9	55,0	Charlen
(da)	10.7	18.3	22.3	62	15.8	10.7	25	32.0	200			otangargs"
Lead (mg/kg)	2.07	1.76	1.88	1.47	4 09	VN	214	32.3	C.2	89.3	79.6	1
GRO (mg/kg)	<5.8	<5.8	0.9>	<5.4	28.3	\ <u>\</u>	YN.	AN	ΨV	ΝΑ	NA	50
DRO (mg/kg)	9.16	<5.8	0 97	7 47	5.0	¥N.	<10	<7	<9.9	8>	165	100
PVOCs (mg/kg)		200	0.0	# O	د0°,	NA	12.9	<i>\\</i>	17.3	35	376	100
Benzene	<0.029	<0.029	<0.030	<0.027	<0.034	0.064	0.00	0				
Ethylbenzene	<0.029	<0.029	<0.030	<0.027	<0.034	0.00	00.00	\$0.035	<0.049	<0.040	<0.152	0.0055
Toluene	0.036	<0.029	<0.060	<0.054	10.02	0.020	<0.050	<0.035	<0.049	<0.040	0.164	2.9
m- & p-Xylenes	<0.029	<0.029	<0.030	<0.05	40.00	0.131	<0.050	<0.035	<0.049	<0.040	<0.152	1.5
o-Xylenes	<0.029	<0.029	<0.030	20.02	0.03	0.087	<0.050	<0.035	<0.049	<0.040	<0.152	
MTBE	<0.029	0.115	<0.030	<0.027	70,031	0.077	<0.050	<0.035	<0.049	<0.040	<0.152	4.100
,2,4-Trimethylbenzene	<0.029	<0.029	<0.030	<0.027	0.121	0.000	<0.050	<0.035	<0.049	<0.040	<0.152	
,3,5-Trimethybenzene	<0.02	<0.000	0000	70.027	0.03	0.080	<0.050	<0.035	<0.049	0.053	0.256	**
PAHs (mg/kg)*		0.020	20.030	Z0.0Z/	<0.031	0.027	<0.050	<0.035	<0.049	0.050	0.508	
Acenaphthene	<0.034	<0.0033	<0.0035	<0.0031	A600.0>	7	0					
Anthracene	0.0154	<0.0037	<0.0038	<0.0034	2000	0.211	\$00.05g	<0.0041	<0.0057	0.106	0.0373	38
Benzo(a)anthracene	<0.0016	<0.0016	<0.0017	<0.0034	10.004	0.389	0.0508	0.00774	<0.0063	<0.0051	<0.0049	3000
Benzo(a)pyrene	<0.0048	<0.0047	<0.0049	0 00400	0.00.0	0.939	0.0354	0.0096	<0.0028	<0.0022	<0.0021	0.088
Benzo(b)fluoranthene	<0.0028	<0.0028	<0.000>	0.00433	20000	7357	0.0708	0.0091**	<0.0081	9900'0>	<0.0062	0.0088
Benzo(k)fluoranthene	<0.0028	<0.0028	<0.0029	<0.0421 <0.0005	50.003	1.13	0.0804	0.0150	<0.0047	<0.0039	<0.0036	0.088
Benzo(ghi)perylene	<0.0037	<0.0037	<0.0038	<0.0020	2000	0.401	0.0232	0.00456	<0.0047	<0.0039	<0.0036	0.88
Chrysene	<0.0019	<0.0018	<0.0019	<0.0034	V0.004	0.381	0.0532	0.0126	<0.0063	<0.0051	<0.0049	1.8
Dibenzo(a,h)anthracene	<0.004	<0.0039	<0.0041	<0.00	20.002	0.791	0.0416	0.0110	<0.0032	<0.0026	<0.0024	8.8
Fluoranthene	<0.003	<0.003	<0.0031	40 00 0>	20000	0.368	0.512	0.00885**	<0.0067	<0.0055	<0.0052	0.0088
Fluorene	0.0335	<0.0031	<0.0032	0.00508	70.0033	3.90	0.198	0.0190	0.0142	<0.0042	<0.0039	200
Indeno(1,2,3-cd)pyrene	<0.0033	<0.0032	<0.0034	SOU 05	40.00	0.140	0.00624	<0.0038	<0.0053	0.122	0.188	100
1-Methyl-naphthalene	0.0440	<0.0043	<0.0044	2000	,0.0033	0.040	0.0650	0.0178	<0.0055	<0.0045	<0.0042	0.088
2-Methyl-naphthalene	0.0625	<0.005	<0.0052	<0.00 O>	70.00±7	0.0352	0.00846	0.0068	<0.0073	0.137	1.61	23
Naphthalene	<0.0014	<0.0014	<0.0014	\$0.0043 \$0.0043	70.0034 70.0034	70700	0.0132	0.0099	<0.0085	0.0119	0.839	20
Phenanthrene	0.112	<0.0025	<0.0026	<0.0016	0000	20.0012	<0.0024	0.00382	<0.0024	0.0266	0.252	0.4
Pyrene	<0.0043	<0.0043	<0.0044	<0.00	20.0020	2.24	0.125	0.0184	0.00830	<0.0035	0.0697	1.8
				10000	14.00.00	6.70	0.1//	0.0164	0.0289	<0.0059	<0.0056	500

### NOTES:

PID = photoionization detector readings. ft bgs = feet below ground surface.

GRO = gasoline range organics.

DRO = diesel range organics. PVOC = Petroleum Volatile Organic Compounds.

MTBE = methyl tertiary-butyl ether.
PAHs = polynuclear aromatic hydrocarbons.
WDNR = Wisconsin Department of Natural Resources.

NA = Not Analyzed.

- = No Cleanup Standards established.

mg/kg = milligrams per kilogram or parts per million (ppm).

< = less than listed detected limits.

compound. The Interim Guidance for PAHs provides three residual contaminant levels for each compound and the most stringent level is used for comparison for each **Bold** = Exceeds WDNR Cleanup Standards.

\* = The Cleanup Standards listed for the PAH compounds are the most stringent for each PAH compound.

\*\* = Reported concentration is estimated due to the concentration being between the level of detection (LOD) and level of quantification (LOQ).

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### TABLE 4 HISTORICAL GROUNDWATER ELEVATION DATA

Donde, LLP
Don Warren Property
211 South Paterson Street
Madison, Wisconsin
BT<sup>2</sup> Project #1952

Well ID	Date Measured	TOC Elevation (feet AMSL)	Depth to Product (feet below TOC)	Depth to Water (feet below TOC)	Product Thickness (ft)	Corrected Groundwater Elevation (feet AMSL)
MW-1	5/2/01	857.03		10.83		846.20
MW-2	5/2/01	856.00		9.94		846.06
MW-3	5/2/01	858.91	****	10.55		848.36
MW-4	5/2/01 9/7/01	856.10	10.08 8.75	10.48 9.29	0.40 0.54	845.95 847.25
PZ-1	5/2/01	856.07		10.16		845.91

Notes:

TOC = top of casing.

AMSL = above mean sea level (approximate).

The top of casing elevation was established utilizing a City of Madison fire hydrant elevation and adding 850 feet to that elevation (from a USGS topographic map elevation) which was used as the benchmark elevation.

# TABLE 5 SUMMARY OF GROUNDWATER MONITORING WELL SAMPLES ANALYTICAL RESULTS

Donde, LLP Don Warren Property 211 South Paterson Street Madison, Wisconsin BT² Project #1952

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	c Hydroc	Chrysene			<b>.</b>		8		<0.030		5	T	-0.030	2	0.02
	r Aromati	ozo(a)anthracene	198	1	8		89		0.017		₹. 5.	T	<0.0030	١.	1
	Polynuclear Aromatic Hydrocarbons (PAHs)	Anthracene		ş	3		8		A.038		85		<0.036	3,000	900
	ă	censphthylene*	∀	280	3	,	Ş		8		5		0.25		-
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VOCs) (ur		ersopropyltolusne	T	6	1	0.84	$\dagger$	0.20		6.5	$\dagger$	0.20	1	1 1	1
spunoc		euezueqi/doudosi		36		0.38		Ø.10	1	4		96.0	1	1 1	1
Organic Compounds (VOCs)		Ethylbenzene		92		0.10	T	40.10	1	8.50	1	€0.10	$\dagger$	2 t 2 t 2 t	
Volatile Orga		Chloromethane	1	£,		9.30	DE. DE		1	41.5	2. £		T	200	
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				+	_	+		-	-	_		$\dashv$			
		Sampled	5/2/01	$\downarrow$	5/2/01	1	5/2/01	_	507/04	1	5/2/01		R140 FS	R140 PAL	
		Sample ID	MW-1		MW-2		MW-3		MW.		PZ-1		WDNR	WDNR NR140 PAL	ofes:

Notes:

Note = memory are per file or parts per billion (pcb).

WITHE = memory textian-charity effection limit

\*\* eless than fished aboratory detection limit

\*\* eless than fished aboratory detection limit

\*\* WDMR Not 4.0 P.L. a prevented action limit from WDNR Chapter NR 140.

\*\* In or standard established.

\*\* In or standard established.

\*\* In or standard established.

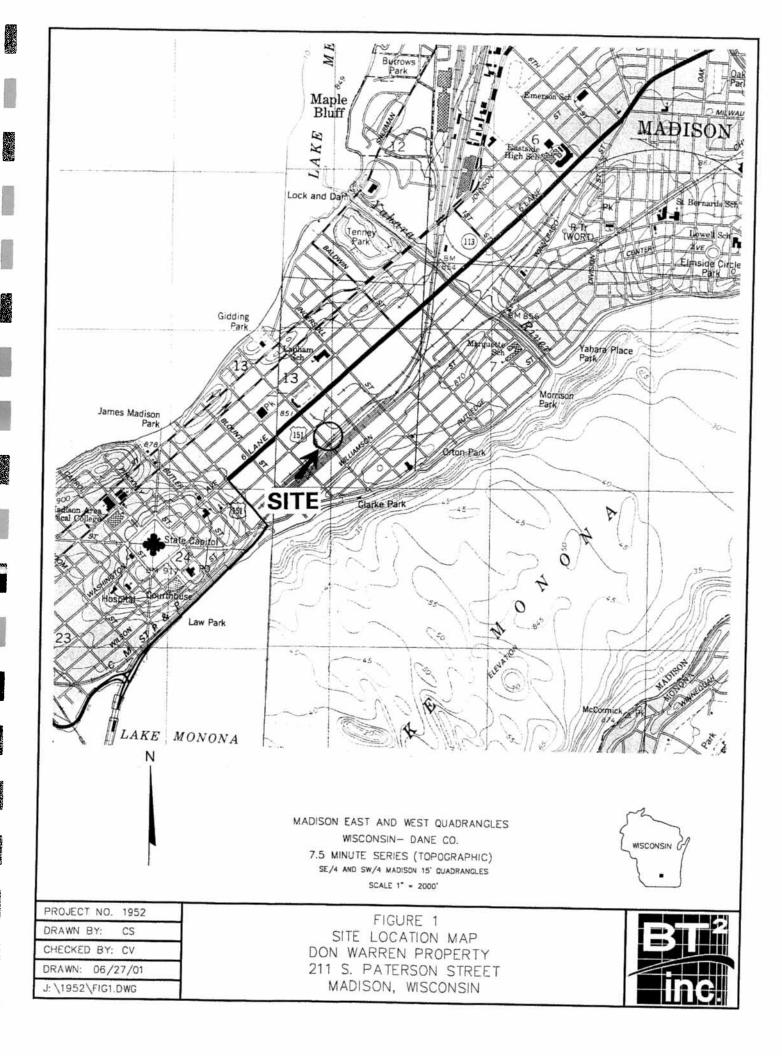
\*\* A proposed SE and PAL was tased for comparison. The proposed ES and PAL was tasken from the WDNR Sold Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) interin Guidance, dated April 1987.

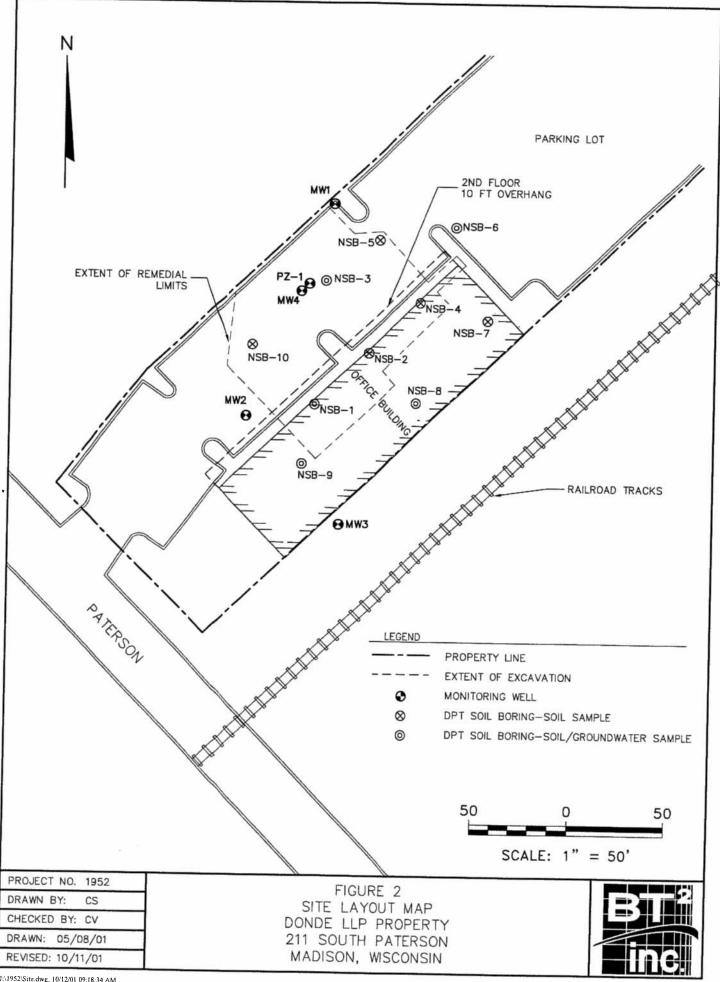
\*\* A proposed SE and PAL was tased for comparison. The proposed ES and PAL was tasken from the level of quantification and is therefore an estimated concentration.

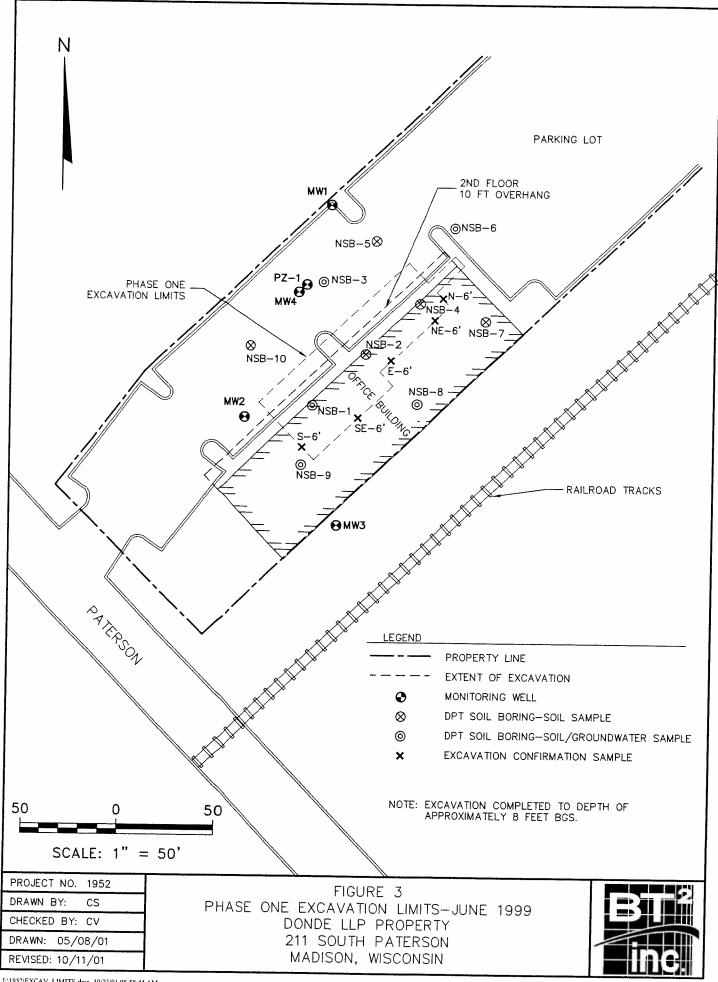
\*\* The reported concentration is between the level of detection (LOD) and level of quantification and is therefore an estimated concentration.

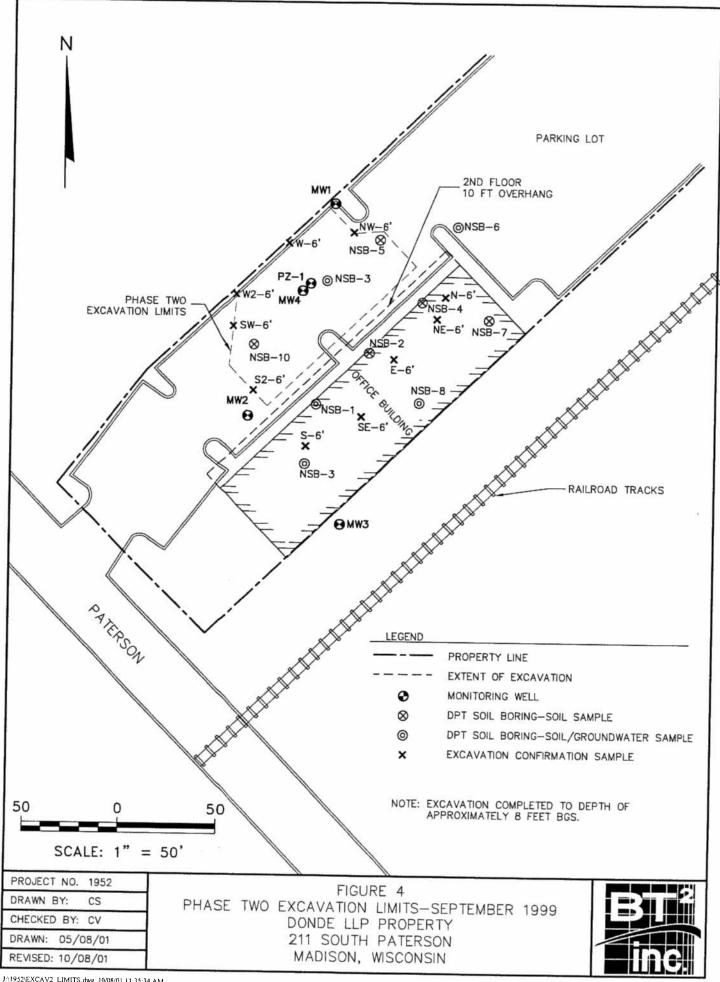
### **FIGURES**

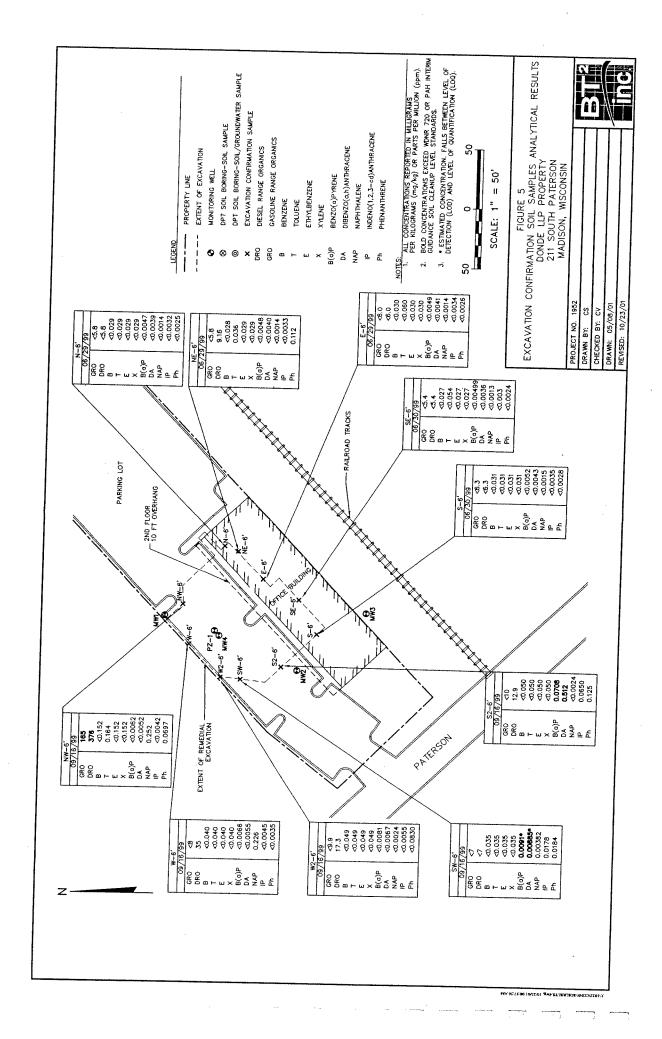
1	Site Location Map
2	Site Layout Map
3	Extent of Excavation, June 1999
4	Extent of Excavation, September 1999
5	Confirmation Soil Samples Analytical Results
6	Groundwater Elevation Contour Map, May 2, 2001
7	Groundwater Analytical Concentrations, May 2, 2001
8	Estimated Extent of Groundwater Contamination

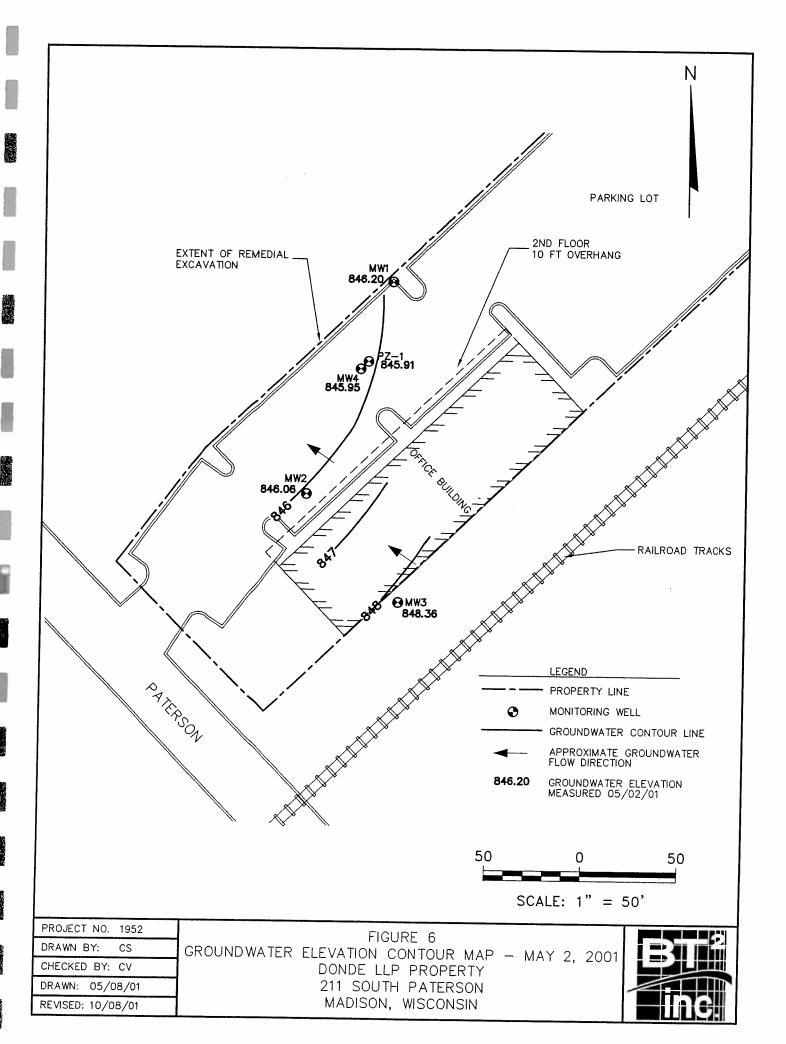


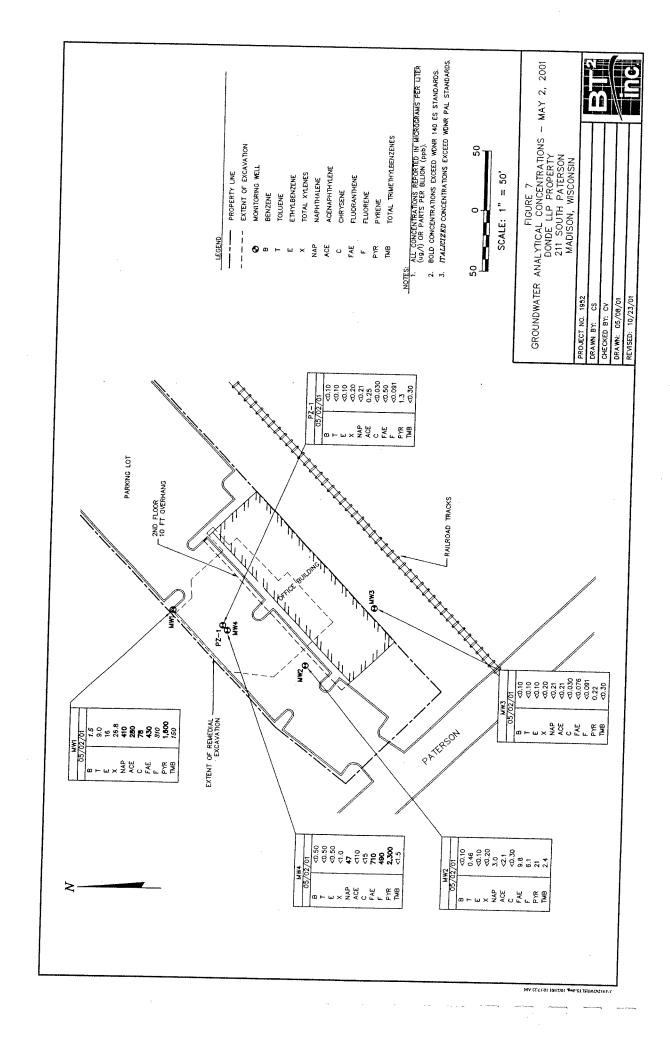












### APPENDIX C

Soil Boring Logs and Borehole Abandonment Forms

Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Route To: Watershed/Wastewater Waste Management Remediation/Revelopment Other Facility/Project Name License/Permit/Monitoring Number Boring Number DONOE LLP NSB-1 ing Drilled By: Name of crew chief (first, last) and Firm Date Drilling Started Date Drilling Completed Drilling Method RICH Last Name  $\underbrace{05,27,1999}_{\mathbf{m}\mathbf{m}\mathbf{d}\mathbf{d}\mathbf{v}\mathbf{y}\mathbf{y}\mathbf{y}\mathbf{y}}$ DIRECT- PUSH  $\frac{\mathcal{O}}{m}\frac{\mathcal{S}}{m} / \frac{\mathcal{Z}}{d} \frac{\mathcal{F}}{d} / \frac{\mathcal{I}}{y} \frac{\mathcal{G}}{y} \frac{\mathcal{G}}{y} \frac{\mathcal{G}}{y}$ m. Sons Emonifering Serves, INC. Unique Well No. DNR Well ID No. Well Name Final Static Water Level Surface Elevation Borchole Diameter Feet MSL Feet MSL Z.0 Local Grid Origin (estimated: ) or Boring Location Local Grid Location c Plane \_ E S/C/N  $\Box$  E  $\square$  N 0 1/4 of 1/4 of Section N, R E/W Long Feet □ S Fcct□ W Facility ID County County Code Civil Town/City) or Village DANE MADISON Soil Properties જ Blow Counts Soil/Rock Description And Geologic Origin For PID/FID Graphic Log Well Diagram Moisture Content Plasticity Index Each Major Unit C S ٠,٥ Shith shall clay - Black - Mostly Clay - Sime Sat/MD. Crayurd shall stiff - Bath - Streng H.C. care. 124 174.9 584 Silth Sand-Brown - Mostet med Calmed Sand - Littlesen Dense-Rame Spenier H.C. Cooks 311 532 SHEPCHAR - CHENEWORKY - MUSTER CLIM- LETTERS LET - STAFF-ث**ن** when a - 8 ther 290 ASABORELWET CL 45.3Bille - Way Ci KHEND == BUCINE O IS FLEET reby certify that the information on this form is true and correct to the best of my knowledge. turc Firm NINE SPRINGS ENVIRONMENTAL

s form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved anally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, uding where the completed form should be sent

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Rcv. 7-98 Route To: Watershed/Wastewater Waste Management Remediation/Revelopment Other

Facility/Project Name	Page of
DONDE LLP	License/Permit/Monitoring Number Boring Number  NS 8-2
Boring Drilled By: Name of crew chief (first, last) and Firm  First Name: Rich Last Name:  Firm: Sorks Engine Ering Services: Inc.  WI Unique Well No.   DNR Well ID No.   Well Name	Date Drilling Started  Date Drilling Completed  Drilling Method
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Facility ID County County DANE	Inty Code   Civil Town/City) or Village    ADISON   Civil Town/City   Civil Town/Cit
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Sample  Tength Att. & Soil/Rock Description  And Geologic Origin For Each Major Unit  Each Major Unit	USCS Graphic Log Well Diagram PID/FID Compressive Strength Moisture Content Liquid Limit Plasticity Index P 200 P 200 RQD/ Comments
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Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Route To: Watershed/Wastewater Waste Management Remediation/Revelopment 
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form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. nally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, iding where the completed form should be sent

Rev. 7-98

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iding where the completed form should be sent

Department of Natural Resources

SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

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form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. In order the completed form should be sent.

Department of Natural Resources

### SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

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Form 4400-122

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Department of Natural Resources	Form 3300-5B Rev. 3-94					
All abandonment work shall be performed in accordance with t Admin. Code, whichever is applicable. Also, see instructions of	the provisions of Chapters NR 111, NR 112 or NR 141, Wis. on back.					
(1) GENERAL INFORMATION	(2) FACILITY NAME					
Well/Drillhole/Borehole Location NSB-1  County DANE	Original Well Owner (If Known)					
	Me. Don WARREN, DONDE, LLP					
Grid Location Gov't Lot Grid Number	Street or Route 916 WILLIAMSON SHREET					
Grid Location	City, State, Zip Code					
MADISON	Facility Well No. and/or Name (If Applicable) WI Unique Well No.					
Street Address of Well ZII SCUTH PATTERSON STREET	Reason For Abandonment					
City, Village MADISON	Date of Abandonment					
WELL/DRILLHOLE/BOREHOLE INFORMATION	May 27, 1999					
(3) Original Well/Drillhole/Borehole Construction Completed On (Date) MAY 27, 1999	(4) Depth to Water (Feet)					
	Pump & Piping Removed? Yes No Not Applicable Liner(s) Removed? Yes No Not Applicable					
☐ Monitoring Well Construction Report Available? ☐ Water Well ☐ Yes No	Screen Removed? Yes No Not Applicable					
Drillhole I res No	Casing Left in Place?  If No, Explain  Yes No					
Borehole						
Construction Type:	Was Casing Cut Off Below Surface? Yes No Did Sealing Material Rise to Surface? Yes No					
Drilled Driven (Sandpoint) Dug	Did Material Settle After 24 Hours? Yes No					
Other (Specify) DIRECT-PUSH	If Yes, Was Hole Retopped? Yes No					
Formation Type:  Unconsolidated Formation  Bedrock	(5) Required Method of Placing Sealing Material  Conductor Pipe-Gravity Conductor Pipe-Pumped					
Total Well Depth (ft.) Casing Diameter (in.) 2.0	Dump Bailer Other (Explain)					
(From groundsurface) Casing Depth (ft.)	Neat Cement Grout monitoring well boreholes only					
Lower Drillhole Diameter (in.) 2t 0	Sand-Cement (Concrete) Grout Concrete Bentonite Pellets					
Was Well Annular Space Grouted? Yes No Unknown	Clay-Sand Slurry Granular Bentonite					
Was Well Annular Space Grouted? Yes No Unknown If Yes, To What Depth? Feet	Bentonite-Sand Slurry Chipped Bentonite  Bentonite - Cement Grout					
7) Material Used To Fill Well/Drillhole	From (Ft.) To (Ft.) Sacks Sealant (Circle Mix Ratio					
Chausan D	Surface /5 /9 // Surface					
GRANULAR BENTONITE	Surface 15 19 1/hs					
8) Comments:						
of Comments.						
Name of Person or Firm Doing Sealing Work	(10) FOR DNR OR COUNTY USE ONLY					
Signature of Person, Doing Work Date Signed	Date Received/Inspected District/County					
C) History 5 27.99	Reviewer/Inspector Complying Work					
Street or Route Telephone Number	Noncomplying Work					
City, State, Zip Code	Follow-up Necessary					
ZSI7 Fou HATCHEON RD. (LOE) 273-9499 City, State, Zip Code	Follow-up Necessary					

MADISON, WIL 53713

echaranciii oi traimai vesonices Form 3300-5B All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back. (I) GENERAL INFORMATION (2) FACILITY NAME Well/Drillhole/Borchole County Original Well Owner (If Known) Location NSB-2 DANE Present Well Owner ΤЕ 1/4 of Sec. ; T. N; R. Me Don WARREN T w DONDE, LLP (If applicable) Street or Route Gov't Lot Grid Number 916 WILLIAMSON Grid Location City, State, Zip Code ft. □ E. □ W. MADISON, WI 53703 Civil Town Name Facility Well No. and/or Name (If Applicable) WI Unique Well No. MADISON Street Address of Well Reason For Abandonment 211 Scarl PATTERSON SPEET SOIL BORING GNLY City, Village Date of Abandonment MADISON MAY 27, 1999 WELL/DRILLHOLE/BOREHOLE INFORMATION (3) Original Well/Drillhole/Borehole Construction Completed On (4) Depth to Water (Feet) (Date) MAY 27, 1999 Pump & Piping Removed? ☐ Yes ☐ No ☐ Not Applicable Liner(s) Removed? Yes No Not Applicable Monitoring Well Construction Report Available? Screen Removed? Yes No Not Applicable ☐ Water Well Yes 🖪 No Casing Left in Place? Yes Drillhole If No, Explain Borehole Was Casing Cut Off Below Surface? Yes No Construction Type: Did Sealing Material Rise to Surface? ☐ Yes ☐ No Drilled ☐ Driven (Sandpoint) ☐ Dug Did Material Settle After 24 Hours? ☐ Yes ☐ No Other (Specify) DIRECT-PUSH If Yes, Was Hole Retopped? Yes No (5) Required Method of Placing Sealing Material Formation Type: Unconsolidated Formation Conductor Pipe-Gravity Conductor Pipe-Pumped ☐ Bedrock Dump Bailer Other (Explain) Total Well Depth (ft.)\_ Casing Diameter (in.) 2.0 (6) Sealing Materials For monitoring wells and (From groundsurface) Casing Depth (ft.) ☐ Neat Cement Grout monitoring well boreholes ora, Sand-Cement (Concrete) Grout Lower Drillhole Diameter (in.) 200 Concrete Bentonite Pellets Clay-Sand Slurry M Granular Bentonite Was Well Annular Space Grouted? Yes No Unknown Bentonite-Sand Slurry ☐ Bentonite - Cement Grout If Yes, To What Depth? ☐ Chipped Bentonite (7) No. Yards. Sacks Sealant (Circle or Volume One) Material Used To Fill Well/Drillhole Mix Ratio From (FL) To (Ft.) or Mud Weight Surface GRANULAR BENTONITE 8 10 /bs (8) Comments:

(9)	Name of Person or Firm Doing Sea	ling Work	Г
	CHES VALLEE - NINE SP	RINGS ENVIOLENTAL GINEMAS	1
	Signature of Person Doing Work	Date Signed	٣.
	Child Wall	5-27-99	
	Street or Route	Telephone Number	
	2817 Fusu HATCHERY RD.	1949- 275 (303)	
	City, State, Zip Code		
	MADISON UN SZFIZ		

(10) FOR DNR OR COUNTY USE ONLY								
Date Received/Inspected	District/County							
Reviewer/Inspector	Complying Work Noncomplying Work							
Follow-up Necessary								

MADISON, WIL 53713

Rev. 3.94 All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back. (1) GENERAL INFORMATION (2) FACILITY NAME Well/Drillhole/Borehole Original Well Owner (If Known) Location NSB-3 DANE Present Well Owner E 1/4 of Sec. Me. Don WARREN DONDE LLA (If applicable) Street or Route 916 WILLIAMSON SNEET Gov't Lot Grid Number Grid Location City, State, Zip Code ft. N. S., ft. T E. T W. MADISON. 53703  $\omega$ ı Civil Town Name Facility Well No. and/or Name (II Applicable) WI Unique Well No. MADISON Street Address of Well Reason For Abandonment 211 SOUTH PATTERSON STREET SOIL BORING ONLY City, Village Date of Abandonment MADISON MAY 27, 1999 WELL/DRILLHOLE/BOREHOLE INFORMATION (3) Original Well/Drillhole/Borehole Construction Completed On (4) Depth to Water (Feet) MAY 27,1999 Yes No Not Applicable Pump & Piping Removed? Liner(s) Removed? Yes No Not Applicable Construction Report Available? Monitoring Well Screen Removed? Yes No Not Applicable ☐ Water Well Yes No Casing Left in Place? Yes Drillhole If No, Explain Borehole Was Casing Cut Off Below Surface? Yes No Construction Type: Did Sealing Material Rise to Surface? Yes No Drilled ☐ Dug Driven (Sandpoint) Did Material Settle After 24 Hours? ☐ Yes ☐ No Other (Specify) DIRECT-PUSH If Yes, Was Hole Retopped? Yes No (5) Required Method of Placing Sealing Material Formation Type: Conductor Pipe-Gravity Unconsolidated Formation Conductor Pipe-Pumped ☐ Bedrock Dump Bailer Other (Explain) Casing Diameter (in.) 2.0 Total Well Depth (ft.) (6) Sealing Materials For monitoring wells and (From groundsurface) Casing Depth (ft.) ☐ Neat Cement Grout monitoring well boreholes only ☐ Sand-Cement (Concrete) Grout Lower Drillhole Diameter (in.) 200 Concrete Bentonite Pellets Clay-Sand Slurry Granular Bentonite Was Well Annular Space Grouted? Yes No Unknown ☐ Bentonite-Sand Slurry Bentonite - Cement Grout If Yes, To What Depth? Chipped Bentonite No. Yards, Sacks Sealant (Circle or Volume One) Mix Ratio or Mud Weight Material Used To Fill Well/Drillhole From (FL) To (Ft.) Surface GRANULAR BENTONITE 16 /65 Comments: (9) Name of Person or Firm Doing Sealing Work FOR DNR OR COUNTY USE ONLY CHER VALLE - NINE SPENIES ENVIRONMENTAL COUNTRY by. Date Received/Inspected District/County Date Signed Signature of Person Doing Work MILDINK Wale Reviewer/Inspector Complying Work Street or Route Telephone Number Noncomplying Work 2817 FISH HATCHERY RD. (608)273-9499 Follow-up Necessary City, State, Zip Code

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

(1) GENERAL INFORMATION	7 130, 300 Histractions		II ITV NAMO			·							
Well/Drillhole/Borehole	County		(2) FACILITY NAME Original Well Owner (If Known)										
Location NSB-4	DANE	"		(11 1210)									
1/4 6 1/4 60			nt Well Own		<del></del>								
1/4 of 1/4 of Sec (If applicable)	; TN; R 🗍 1	a We	e Don l	JARREN, [	BONDE	- LLP							
			t or Route										
Grid Location Gov't Lot	Grid Number		6 Whis	mson s	SPREET	<u> </u>							
ft. N. S.	6 C F C w		State, Zip C		~								
Civil Town Name	ft. 🗌 E. 🔲 W		140120N	, WI 53	103								
MADISON		Гасш	ty Well 140. a	and/or Name (II A	Applicable	WI Unique Well No.							
Street Address of Well		Reaso	on For Abanc	lonment									
211 Scara PATTERSO	NSREET			ING GNLY									
City, Village		Date	of Abandonn	ient									
MAOISON			nay 27,	1999									
WELL/DRILLHOLE/BOREHOLI (3) Original Well/Drillhole/Borehole	E INFORMATION												
	e Construction Completed On	ı	to Water (Fe	-									
(Date) May 27, 1999			& Piping Re	-		No Not Applicable							
☐ Monitoring Well	Construction Report Available?		s) Removed? n Removed?	L_J *	Yes 🔲 i								
☐ Water Well	Yes No	1	r Kemoved? g Left in Plac	D ;		No Not Applicabl							
Drillhole	1es		Explain	e. 🔲 1	(es 🔲 )	No							
Borehole	i	1											
		Was C	asing Cut Of	Below Surface?	[7]	Yes No							
Construction Type:	<u></u> .			l Rise to Surface		Yes No							
Drilled Driven	(Sandpoint) Dug	Did M	aterial Settle	After 24 Hours?	-	(es No							
Other (Specify) DIRECT-	PUSH	If Yes, Was Hole Retopped? Yes N											
Formation Type:		(5) Require	ed Method of	Placing Sealing	Material								
Unconsolidated Formation	☐ Bedrock	l —	ductor Pipe-			Pipe-Pumped							
			np Bailer	. ==	ther (Exp								
Total Well Depth (ft.)	Casing Diameter (in.) 2.0	(6) Sealing	-		For mo	nitoring wells and							
(From groundsurface)	Casing Depth (ft.)		it Cement Gro		monitor	ring well boreholes of							
Lower Drillhole Diameter (in.)	2.0			oncrete) Grout									
(aa) <u>- 2</u>			icrete y-Sand Slurry			tonite Pellets							
Was Well Annular Space Grouted?	Yes No Unknown		y-Sand Sturry tonite-Sand !			nular Bentonite conite - Cement Grout							
If Yes, To What Depth?	Feet		pped Benton		☐ Bent	onite - Cement Grout							
7)			T	I No V	<del></del>								
Material Used To Fi	ll Well/Drillhole	From (FL)	To (Ft.)	No. Yards, Sacks Sealant or Volume	(Circle One)	Mix Ratio or Mud Weight							
				or Volume	One)	or wind weight							
GRANULAR BEN	JONINE.	Surface	18	10/6									
				1									
		<del></del>											
					1								
B) Comments:													
4400			<del></del>										
Name of Person or Firm Doing Seal	ling Work	(10)	FOR	DNR OR COL	INTV	SE ONLY							
CHES VALLE - NIVE SP	RIVER EINERGINEWAL GOVERNA		Received/Ins			ict/County							
Signature of Person Doing Work	Date Signed	rec.											
Challed	5-27-99	Revie	wer/Inspect	or	Tim	Complying Work							
Street or Route	Telephone Number			2000	lö	Noncomplying Worl							
2817 Fish HATCHERY RD.	(608)273-4499	Follo	w-up Necess	агу									
City, State, Zip Code													
MADISON, WI 53713													

Name of Person or Firm Doing Sealing Work

Cher Value - Nove Spends Environmental Consumers to Signature of Person Doing Work

Signature of Person Doing Work

Date Signed

5-77-99

Street or Route

Telephone Number

Z817 Fish Hatcher Rs. (606)273.4499

City, State, Zip Code

MADISON, WI 53713

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected District/County

Reviewer/Inspector Complying Work

Noncomplying Work

Follow-up Necessary

rom 3300-5B Rev. 3-94 All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back. (1) GENERAL INFORMATION (2) FACILITY NAME Well/Drillhole/Borehole County Original Well Owner (If Known) Location NSB-60 DANE Present Well Owner ΠE 1/4 of Sec. 1/4 of ; T. Me Don WARREN. DONDE LLP W (lf applicable) Street or Route Gov't Lot 916 WILLIAMSON SPREET **Grid Number** Grid Location City, State, Zip Code ft. □ E. □ W. MADISON, WI 53703 Civil Town Name Facility Well No. and/or Name (If Applicable) WI Unique Well No. MADISON Street Address of Well Reason For Abandonment 211 SOUTH PATTERSON STREET SOIL BORING GULY City, Village Date of Abandonment MADISON MAY 27, 1999 WELL/DRILLHOLE/BOREHOLE INFORMATION (3) Original Well/Drillhole/Borehole Construction Completed On (4) Depth to Water (Feet) MAY 27, 1999 Pump & Piping Removed? Yes No Not Applicable Liner(s) Removed? Yes No Not Applicable ☐ Monitoring Well Construction Report Available? Screen Removed? Yes No Not Applicable Water Well Yes 📓 No Casing Left in Place? Drillhole If No, Explain Borehole Was Casing Cut Off Below Surface? Yes No Construction Type: Did Sealing Material Rise to Surface? ☐ Yes ☐ No Drilled ☐ Dug Driven (Sandpoint) Did Material Settle After 24 Hours? ∏ Yes ∏ No Other (Specify) DIRECT-PUSH If Yes, Was Hole Retopped? ☐ Yes ☐ No (5) Required Method of Placing Sealing Material Formation Type: Conductor Pipe-Gravity Conductor Pipe-Pumped Unconsolidated Formation Bedrock Dump Bailer Other (Explain) Total Well Depth (ft.) Casing Diameter (in.) 2.0 (6) Sealing Materials For monitoring wells and (From groundsurface) Casing Depth (ft.) ☐ Neat Cement Grout monitoring well boreholes only Sand-Cement (Concrete) Grout Lower Drillhole Diameter (in.) 200 ☐ Concrete Bentonite Pellets Clay-Sand Slurry 🞆 Granular Bentonite Was Well Annular Space Grouted? Yes No Unknown Bentonite-Sand Slurry Bentonite - Cement Grout If Yes, To What Depth? Chipped Bentonite (7) No. Yards, Sacks Sealant (Circle One) Material Used To Fill Well/Drillhole Mix Ratio or Mud Weight From (FL) To (Ft.) or Volume Surface GRANULAR BENTOWITE 12 ئەل/ (8) Comments: (9) Name of Person or Firm Doing Sealing Work (10) FOR DNR OR COUNTY USE ONLY THEIR VALLE - NIME SPENIES ENVIRONMENTAL CONSIGNED by Date Received/Inspected District/County Date Signed 5-53-59 Reviewer/Inspector Complying Work Street or Route Telephone Number Noncomplying Worl 2817 FISH HATCHERY RD. (608)273-9499 Follow-up Necessary City, State, Zip Code

MADISON, WI 53713

Form	3300-5B	Rev. 3-94
		-101. 3-74

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

(I) GENERAL INFORMATION	(2) FACILITY NAME
Well/Drillhole/Borehole County	Original Well Owner (If Known)
Location NSB7 DANE	(30.00-11.00)
	Present Well Owner
1/4 of 1/4 of Coo	Me Don WARREN, DONDE, LLP
(If applicable)	Street or Route
Grid Number	916 WILLIAMSON SPREET
Grid Location	City, State, Zip Code
ft. N. S.,ft. E. W	
Civil Town Name	Facility Well No. and/or Name (If Applicable) WI Unique Well No.
MADISON	(= 177 mass) It oraque then 110.
Street Address of Well	Reason For Abandonment
211 SOUTH PATTERSON STREET	SOIL BORING GIVLY
City, Village	Date of Abandonment
MADISON	May 27, 1999
WELL/DRILLHOLE/BOREHOLE INFORMATION	
(3) Original Well/Drillhole/Borehole Construction Completed On	(4) Depth to Water (Feet)
(Date) MAY 27, 1999	Pump & Piping Removed? Yes No Not Applicable
	Liner(s) Removed? Yes No Not Applicable
Monitoring Well Construction Report Available?	Screen Removed? Yes No Not Applicable
☐ Water Well ☐ Yes 💹 No	Casing Left in Place? Yes No
Drillhole	If No, Explain
Borehole	
	Was Casing Cut Off Below Surface? Yes No
Construction Type:	Did Sealing Material Rise to Surface? Yes No
Driven (Sandpoint) Dug	Did Material Settle After 24 Hours? Yes No
Other (Specify) DIRECT-PUSH	If Yes, Was Hole Retopped? Yes No
	(5) Required Method of Placing Sealing Material
Formation Type:	
Unconsolidated Formation Bedrock	Conductor Pipe-Gravity Conductor Pipe-Pumped
Total Well Depth (ft.) Casing Diameter (in.) 2.0	Dump Bailer Other (Explain)
(From groundsurface) Casing Depth (ft.)	(6) Sealing Materials For monitoring wells and  Neat Cement Grout monitoring well boreholes on
Lower Drillhole Diameter (in.) 2 t O	Sand-Cement (Concrete) Grout  Concrete  Bentonite Pellets
Was Well Annular Space Grouted? Yes No Unknown	
If Yes, To What Depth? Feet	Bentonite-Sand Slurry Bentonite - Cement Grout Chipped Bentonite
(7) Material Used To Fill Well/Drillhole	From (Ft.) To (Ft.) Sacks Sealant (Circle Mix Ratio
	or Volume One) or Mud Weight
Charles De la 15	Surface (%)
GRANNER BENTONITE	Surface 8 10 lbs
(8) Comments:	
(9) Name of Person or Firm Doing Sealing Work	(10) POR PUR OR COMPANY
Cher Valle - 11 - Coo C	(10) FOR DNR OR COUNTY USE ONLY
Signature of Person Doing Work Date Signed	Date Received/Inspected District/County
5-27-99	Reviewer/Inspector Complying Work
Street or Route Telephone Number	
2817 Four HATCHER RS. (GOE) 273 GOPG	Noncomplying Work
City, State, Zip Code	Follow-up Necessary
MAO15071, WI 53713	V. W. C. C. C. C. C. C. C. C. C. C. C. C. C.
MITOLOGO, W.C JOTIO	

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

π	) GENERAL INFORMATION		1(2)	CACHI FRY VI . LOS			
<u>`</u>	Well/Drillhole/Borehole	County		ACILITY NAME Driginal Well Own	ner (Jf Knoum)		
į.	Location NSB-8	DANE		Mightal Well Owl	ici (II Kilowii)		
		П	E P	resent Well Own	er .		
	1/4 of1/4 of Sec (If applicable)	; TN; R 📙 🕷		Me Don L	ARREN.	DONDE	ELLP
			S	treet or Route		_	
	Grid Location	Grid Number		916 Willia		Short	T
	ft. N. S.,	6050		City, State, Zip Co			
	Civil Town Name	ft E W	·	MADISON	, WI 5	3 +0.3	
	MADISON		1 "	cuity wen No. a	not traine (II	Applicati	le) WI Unique Well No.
	Street Address of Well		R	eason For Aband	opment		
	211 SouTH PATTERSON	SPREET			ING GNLY		
	City, Village	•	D.	ate of Abandonm	ent .		
NA.	MADISON		<u> </u>	MAY 27,	1999		
$\frac{\mathbf{v}}{(3)}$	ELL/DRILLHOLE/BOREHOLE Original Well/Drillhole/Borehole	INFORMATION	Les 18				
` '	_	Construction Completed On	1	epth to Water (Fe	***************************************		
	(Date) MAY 27, 1999			ımp & Piping Rei ner(s) Removed?			No Not Applicable
	☐ Monitoring Well	Construction Report Available?	1	reen Removed?		Yes	7. Land
	☐ Water Well	Yes No		sing Left in Plac	e?		No Not Applicable
	Drillhole .		,	No, Explain		ш	
	Borehole						
	Construction Times			as Casing Cut Off			Yes No
	Construction Type:	(Sandpoint) Dug		d Sealing Materia			Yes No
	Other (Specify) DIRECT-F			d Material Settle . f Yes, Was Hole !			Yes No
							Yes No
	Formation Type:		l	quired Method of			
	Unconsolidated Formation	☐ Bedrock		Conductor Pipe-	- ==		r Pipe-Pumped
	Total Well Depth (ft.) Ca	asing Diameter (in.) 2.0 asing Depth (ft.)		Dump Bailer aling Materials	니	Other (E:	onitoring wells and
	(From groundsurface) Ca	asing Depth (ft.)		Neat Cement Gro	out		oring well boreholes or
		_		Sand-Cement (Co			orang won coronores on
	Lower Drillhole Diameter (in.) 2	<u>: O</u>		Concrete	·	! 🔲 Ber	ntonite Pellets
	Was Well Annular Space Grouted?			Clay-Sand Slurry			anular Bentonite
	If Yes, To What Depth?	Yes No Unknown		Bentonite-Sand S		☐ Ber	ntonite - Cement Grout
	Tree, to what Depart	rect		Chipped Benton	ite	·	
(7)	Material Used To Fill	Well/Drillhole	From (	(FL) To (Ft.)	No. Yards,	(Circle	Mix Ratio or Mud Weight
		_	110111 (	10 (12)	Sacks Sealant or Volume	One)	or Mud Weight
	GRANULAR BEN	TEN I PE	Surfa	∞ /o	12/6	- 1	
**********	OGNICON DEP					-	· · · · · · · · · · · · · · · · · · ·
			-				
(8)	Comments:						
(-,	Constitution .						<u>.</u> i
9)	Name of Person or Firm Doing Sealin	ng Work	17	10) FOR	DNR OR CO	HATV	ISP ONLY
	^ .	inics Environmenth Consider		Date Received/In:	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED		trict/County
-	Signature of Person Doing Work	Date Signed	, i				]
_	Chill of the child	5-27-49	R	Reviewer/Inspect	or	$\neg \neg$	Complying Work
	Street or Route	Telephone Number					Noncomplying Worl
7	2817 Fish HATCHEEZ RD. City, State, Zip Code	(668)273-4499	F	ollow-up Necess	ary		7
,		1	Ŀ			A N	
_	MADISON, WI 53713						

All abandonment work shall be perform Admin. Code, whichever is applicable.	ed in accordance with t Also, see instructions o	he provision back.	ons of Chap	oters NR 111	, NR 11:	2 or NR 141, Wis.
(1) GENERAL INFORMATION		(2) FAC	LITY NAME			
Well/Drillhole/Borehole County Location NSB-9	) ANE	Origi	nal Well Own	er (If Known)		
1/4 of 1/4 of Sec ; T	N; R 🔲 E	Me	nt Well Owne . Don' W		DONDE	LILP
Grid Location Gov't Lot	Grid Number	911		msoul	SNEE	T.
ft. N. S., Civil Town Name	ft E W.	$\mathbf{I}$	State, Zip Co MiSON,	W1 5	3703	
MADISON Street Address of Well					Applicab	le) WI Unique Well No.
ZII SCUTA PATTERSON STREET	<i>T</i>	S	n For Abando	ING GIVLY		
MADISON			of Abandonmo May 27,			
WELL/DRILLHOLE/BOREHOLE INFOR	MATION					
(3) Original Well/Drillhole/Borehole Construc	ction Completed On	(4) Depth	to Water (Fed	et)		
	ction Report Available? Yes No	Liner( Screer Casing	& Piping Rers) Removed? Removed? Left in Place Explain	R	Yes	
Borehole		1				
Construction Type:  Drilled  Driven (Sandpo)  Other (Specify)  DIRECT-PUSH	int) Dug	Did Se Did M	aling Materia	Below Surface I Rise to Surface After 24 Hours' Retopped?	ce? 📋	Yes No Yes No Yes No Yes No Yes No
Formation Type: Unconsolidated Formation	Bedrock	Cor	ed Method of nductor Pipe- np Bailer	Placing Sealin	Conducto	r Pipe-Pumped
Total Well Depth (ft.) Casing Di (From groundsurface) Casing De	ameter (in.) <u>Z.O</u> pth (ft.)	(6) Sealing	g Materials at Cement Gro		monit	onitoring wells and oring well boreholes on
Lower Drillhole Diameter (in.) 2t 0		Co1	id-Cement (Co ncrete y-Sand Slurry		¦ ☐ Be	ntonite Pellets
Was Well Annular Space Grouted?  If Yes, To What Depth?	Yes No Unknowr	☐ Ber	y-said Stury itonite-Sand S pped Benton	Slurry	. —	anular Bentonite ntonite - Cement Grout
(7) Material Used To Fill Well/Dr	rillhole	From (FL)	To (Ft.)	No. Yards, Sacks Sealar or Volume	nt (Circle One)	Mix Ratio or Mud Weight
GRANNIAR BENTONIA	E	Surface	14	161	br_	
(8) Comments:						
(9) Name of Person or Firm Doing Scaling Work  Ches Valle - Nine Spenies C  Signature of Person Doing Work   Date Si	MYSSON MENDAL GOVE HAND	000.01.00 1 000	FOR Received/Ins			USE ONLY trict/County  Complying Work
Street or Route Telepho ZSIF Fun HATCHECY RD. (LCE)	one Number 1273 -9499	10 A4 2 4 4	w-up Necess			Noncomplying Work
City, State, Zip Code  MAOISON, WI 53713						

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

(1) GENERAL INFORMATION

(2) FACILITY NAME

Well/Drillhole/Borehole
Location NSQ-10

County

Original Well Owner (If Known)

(1) GENERAL INFORMATION		(2) FACI	JTY NAME		
Well/Drillhole/Borehole County Location NSB-10 DANE				er (If Known)	
Location NSB-10 DANE			. 111 11 6		
1/4 of 1/4 of Sec ; T N; R	E		t Well Owne	. ^	
(If applicable)	[] W	9111	Dors Worke	IARREN, DON	DE, LLP
Gov't Lot	d Number			Ca	
Grid Location	a Number	Cim	Prove 7:= C	mson Sa	EET
ft. N. S., ft.	E. 🗌 W.		State, Zip Co		
Civil Town Name	<u>г. П м.</u>	Hacrist	TUISON,	WI 5370	).5 
MADISON		racmi	Well No. a	novor Name (II Appli	cable) WI Unique Well No.
Street Address of Well		Dagge	For Aband		
211 SOUTH PATTERSON SPEET					
City, Village		Date o	f Abandonm	ING BILY	
MADISON	1		1A4 27,		
WELL/DRILLHOLE/BOREHOLE INFORMATION	<u>-</u>		1179 27	[[[]]	
(3) Original Well/Drillhole/Borehole Construction Completed	On /	(4) Denth	to Water (Fe	et)	
(Date) May 27,1999			•		in Marin Marin Street
Ting Zillia			& Piping Rea ) Removed?	=	No Not Applicabl
☐ Monitoring Well   Construction Report Av	ailable?	-	Removed?	□ '"	No Not Applicable
☐ Water Well ☐ Yes ■ No			Left in Place	Yes Yes	No Not Applicable
☐ Drillhole	- 1	If No. 1		U 103	☐ No
Borehole	İ				
		Was Ca	sing Cut Off	Below Surface?	∏ Yes ∏ No
Construction Type:				I Rise to Surface?	☐ Yes ☐ No
Drilled Driven (Sandpoint) Dug	:			After 24 Hours?	Yes No
Other (Specify) DIRECT-PUSH			, Was Hole I		Yes No
	(4)				
Formation Type:	10.	-		Placing Sealing Mate	
Unconsolidated Formation Bedrock	1		luctor Pipe-	· <u></u>	ictor Pipe-Pumped
Total Well Depth (ft.) Casing Diameter (in.) 2.0	0 4		p Bailer		(Explain)
(From groundsurface) Casing Depth (ft.)	<u>-</u>  "	Sealing			r monitoring wells and
( Dopar (LL)		********	Cement Gro	•	onitoring well boreholes on
Lower Drillhole Diameter (in.) 2,0	l	Cone	•	oncrete) Grout	
	Ī			=	Bentonite Pellets
Was Well Annular Space Grouted? Yes No	Unknown		-Sand Slurry onite-Sand S	4 7	Granular Bentonite
If Yes, To What Depth?	Feet				Bentonite - Cement Grout
			ped Benton		
(7) Material Used To Fill Well/Drillhole	-	rom (Ft.)	To (Ft.)	No. Yards, (Cir	cle Mix Ratio
		10111 (1 1.)	10 (11.)	Sacks Sealant On On	e) or Mud Weight
CANNAR D		Surface	8	75 H	
GRANULAR BENTONITE			<u> </u>	10/65	
	1		·		
•	1				
					_
(8) Comments:					
9) Name of Person or Firm Doing Sealing Work	1	(10)	FAD	DNR OR COUNT	V HCR ONLY
Ches VALLE - Nove Springs Environmental	C. 11	Date	Received/Ins		District/County
Signature of Person Doing Work Date Signed	willow party fix.	Date	(CCC14CUM)	pecied	District County
2.52-86		Revie	wer/Inspect	or I	Complying Work
Street or Route Telephone Number			, mapeen		
2817 Four HATCHER RS. (608)273-4499		Follo	v-up Necess	ary	Noncomplying Worl
City, State, Zip Code		I onev	-up recess	ary .	Ĭ
MADISON, WIL 53713		00,000	1.50		

#### State of Wisconsin Department of Natural Resources

# WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5B Rev. 3-94

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

(I) GENERAL INFORMATION		(2) FAC	ILITY NAME	· · · · · · · · · · · · · · · · · · ·		
Well/Drillhole/Borehole	County			ner (If Known)		
Location	DANE					
	E		nt Well Own			
1/4 of 1/4 of Sec (If applicable)	; TN; R 🗍 w	We	e Don li	) ARREAL,	DONDE	LLA
· · · · · · · · · · · · · · · · · · ·			t or Route		P.	
Grid Location	Grid Number	91	6 Willia	msou	Shore	T
ft. N. S.,	. O = O		State, Zip C			
Civil Town Name	ft. E. W	1 11	1411200	, WI 5	3703	
MADISON		Pacini	ty well No. 8	ind/or Name (I	f Applicable	le) WI Unique Well No.
Street Address of Well		Reac	n For Aband	lan-s		
211 Som PATTERSON	1 Spreet			ing Guly		
City, Village		Date	of Abandonm	and Chily		
MADISON			nay 27,			
WELL/DRILLHOLE/BOREHOLE	INFORMATION					
(3) Original Well/Drillhole/Borehole	Construction Completed On	(4) Depth	to Water (Fe	et)		
(Date) May 27, 1999		Pump	& Piping Re	moved?	Yes 🗍	No Not Applicable
			s) Removed?		· •	No Not Applicable
Monitoring Well	Construction Report Available?	Screen	Removed?		Yes 🗔	No Not Applicable
Water Well	Yes 📓 No	Casin	g Left in Plac	e? 📙		No No
Drillhole		If No,	Explain			
Borehole						
Construction Type				Below Surface		Yes No
Construction Type:	(Sandpoint) Dug			l Rise to Surfa	· · · · · · · · · · · · · · · · · · ·	Yes No
Other (Specify) DIRECT-				After 24 Hours	L	Yes No
- outer (openly) Direct	( VSH	L	≾, Was Hole			Yes No
Formation Type:		(5) Requir	ed Method of	Placing Sealing	g Material	
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If Yes, To What Depth?	Feet		pped Benton	ite	Ben	tonite - Cement Grout
7)			pped Denion			
Material Used To Fil	l Well/Drillhole	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealar	(Circle	Mix Ratio
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V)						
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Name of Person or Firm Doing Seal		(10)	FOR	DNR OR CO	DUNTY L	ISE ONLY
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Form 4400-122 Rev. 7-98

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### APPENDIX E

Soil Boring Logs, Well Construction Forms, and Well Development Forms

State of Wisconsin
Department of Natural Resources

## SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

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SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

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SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

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Number and Type Length Att. &	Recovered (ir Blow Counts	Depth in Feet (Below ground starf)			Lacit I	viajoi Omi	-		USC	Graphic	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
		F	ASP		nVELL					0 -			Ow	20	1	F	124	120
		E-5	SILA	1 243~ D.	4 MU -	Brown	,		Fill								_	
		E *	WATE	٧- 8-	10 FEG 7	-												
		E	Mos	TCY SILI	- seme	CLAN AN	JH BLACK NO FINE GI	:- NANNED	Ci									
		ER	344	w-snr	r-wet	- Smun	6-000c											
		E,																
j		73																
		-25	- SILTY SOME	1 CLAME! 2 CLAM/S	1 SANO-	GREY-FIN	ue graine strung	- ∞ει∟	SM			l						
						30 Fee		,										
		E ]	CHDC	at pac		30.465	7										l	
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		=													l			
		_																
ereby cen	ify tha	t the in	ıforma	tion on	this for	n is true a	and correc	t to the	e best o	of my	knowl	<u> </u>			1_			
дпапите (	2.14	W.C	Q					im	<sup>ری</sup> (لی					· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	······································		
his form is	authori	zed by	Chapte	ers 281 2	283, 289	. 291, 292	293 205				Comi	letion	ofthi	s form	ic ma	ndator	, Feil	ure to file

Inis form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. From the information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin	Translation (Total	777 34		MONITORING WE	LL CONSTRI	ICTTO
	Watershed/Wastewater [_] Remediation/Redevelopment			Form 4400-113A	Rev. 7-98	J ( ).
Facility/Project Name	Local Grid Location of Well		6.5	Well Name		
DONOE, LLP	IL	□S	fr_ 🗆 🛱 .	MW-1		
Facility License, Permit or Monitoring No.	Local Grid Origin (esti	Long.	"	Wis. Unique Well No PB 1 6 8		
Facility ID	St. Plancft_	. N 1	fl.E. S/C/N	Date Well Installed	109120	<u>o i</u>
Type of Well	Section Location of Waste/S		O E	Well Installed By: N		
Well Code/	1/4 of 1/4 of Sc		L W	KENN HCCIMI		
Distance from Waste/ Enf. Stds.	Location of Well Relative to u Upgradient s	☐ Sidegradient Gov.	Lot Number	BADGER STATE DE	. 1.	
Sourceft. Apply _	• -	□ Not Known . —		DADERESTANE		
A. Protective pipe, top elevation	ft MSL		and lock?		"⊠ Yes 🗆	] N
B. Well casing, top elevation	ft. MSL	1 11:37	tective cover pi tside diameter:	pe:	12.	<u>،</u>
C. Land surface elevation	ft_MSL	b. L	ength:		_1.	
	-	c.M	laterial:		Steel 🖄	
D. Surface seal, bottom ft. MS	7.5×2.7+7				Other 🗆	- ·
12. USCS classification of soil near screen:	1 12 / (31)	1 119 \	dditional protect		☐ Yes 🗷	ΓN
GP GM GC GW SY	W D SP D		f yes, describe:			
Bedrock []		3. Surfa	acc scal:		Bentonite 🛘	
13. Sieve analysis performed?	es MENo				Concrete 🗷	.w
	1 883	₩ ` <u> </u>	niel between no	ell casing and protect	Other 🗆	_
14. Drilling method used: Rota Hollow Stem Aug		4. 141210	Hai between w	·	Bentonite <b>A</b>	3 ^
	er 🗆 🔛				Other 🗆	566
		S Armi	niar space scal:	a. Granular/Chipp		ُد 3
	Lir 🗆 01   👹	, s	Lbs/gal mud	weight Bentomit		3 5
Drilling Mud □ 0 3 No	me 🖪 99			weight Bent		3
16 Delling additions used?		d	_ % Bentonite	Bentonite-c	ement grout 🗆	5 .
16. Drilling additives used?	2 1 NO	e	BAG Ft V	nlume added for any		
Describe		f. Ho	ow installed:	_	Tremie 🗆	0 -
17. Source of water (attach analysis, if require	ed):			Tren	nic pumped 🗆	0
		( P		a Renton	Gravity 🖪	08 33
	<del></del>	KON	onite seal:	in 1/2 in Ber		
E. Bentonite seal, top ft. MSL	or IOft.	B. C	J1/4 III. 123/6		Other 🛘	- 3 - 8%
L. Delama sea, up						*****
F. Fine sand, topft MSL o	r2.0ft\	rish /		Manufacturer, produc		
,	<u> </u>	1/2/ / E	10/60 Oth			
G. Filter pack, top ft. MSL o	x3.2ft		lume added			
H. Screen joint, top ft. MSL o	* 5 On		pack material:	Manufacturer, produ		S12-
ii. occorriging top		h Vo	lume added	5 BAG5 ft		
. Well bottom ft MSL o	r_15.0A\ 7	9. Well c		ush threaded PVC sel	nedule 40 🖳	23
	→ 「隆		Fl	ush threaded PVC scl		
. Filter pack, bottom ft MSL o	r_15.0ft			E DVC	Other 🗆	#### #####
K. Borchole, bottom ft MSL o	- 15 Of S	<i>50</i> 2	*	CHAPPIE PVC	actory out 🗵	11.
L. Borenote, bottom n. M3D 0	(	i. 3ci	reen type:		nuous slot	
Borehole, diameter _ 6.0 in.		<u> </u>	~		Other 🛘	
1. O.D. well casing _ 2.25 in.		b. Mar c. Slo		10NOFLEX	0.070	. ŧ
		•	tted length:		10.6	. ,
I. I.D. well casing _ 2.0 5 in.		11. Backfi	ll material (belo	ow filter pack):	None 🕮	
hereby certify that the information on this form	n is true and correct to the be	est of my knowledge.				
ignature O 11/1/10	Firm		***************************************			1
( WILLY )	BT2 lue	٤				?

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

	Watershed/Wastewater		MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 7-98
	Remediation/Redevelopment	✓ Other	
Facility/Project Name  DONDE, LLP	Remediation/Redevelopment Local Grid Location of Well	□ Nft □ E	Well Name MW - Z
Facility License, Permit or Monitoring No.	Local Grid Origin	meted: (1) or Well Location (	Wis. Unique Well No. DNR Well ID No.
	Lat	"Long. "O	r 18167
Facility ID	St. Planeft	N, fl. E. S/C/N	
Type of Well	Section Location of Waste/So	□ F	m m d d v v v y Well Installed By: Name (first, last) and Firm
Well Code /	1/4 of1/4 of Sec	:,T N, R 🗒 E	Keyw Mchuber
	Location of Well Relative to		- Markon I was the C
Distance from Waste/ Enf. Stds.		☐ Sidegradient	BADGER STATE DAYLING
Sourceft Apply _	d Downgradient n	Not Known	
	ft_MSL	1. Cap and lock? 2. Protective cover	Marine: No □ No
B. Well casing, top elevation	ft. MSL	a. Inside diamete	• •
<u> </u>	6 165	b. Length:	_ <u>/.</u> Qft.
C. Land surface elevation	ft MSL	c. Material:	
D. Surface seal, bottom ft. MS	Lor / Oft	C. Material:	Steel 💆 04
		1.88.5	Other 🗆 💮
12. USCS classification of soil near screen	/ 711	d. Additional pro	
		If yes, describ	ė:
SM C SC C ML C MH C	T GH CH CH CH	3. Surface scal:	Bentonite 🛘 30
Bedrock 🗆	₩	3. Surrace scar.	Concrete 💆 01
13. Sieve analysis performed?	es 🖪 No 💮		Other 🛛 🔉
14. Drilling method used: Rota	ry □ 50	4. Material between	well casing and protective pipe:
Hollow Stem Aug	* I 1003		Bentonite 2 30
	er 🗆 🔛		Other 🛘 🚟
		5. Annular space se	
15. Drilling fluid used: Water 02	\tir □ 01 🔛	5. Amular space se	uid weight Bentonite-sand slurry □ 35
	me <b>1</b> 99		
			and weight
16. Drilling additives used?	s M No		te Bentonite-cement grout ☐ 50
	_	W.3	volume added for any of the above
Describe		f. How installed:	
17. Source of water (attach analysis, if require	-4):		Tremie pumped 🗆 02
17. Source of water (attack allarysis, if require	au).		Gravity 🗟 08
	🐰	6. Bentonite seal:	a. Bentonite granules [] 33
		b. □1/4 in. ■	78 in. □ 1/2 in. Bentonite chips ■ 32
E. Bentonite seal, top ft. MSL	<b>\ 1</b> 660		Other 🛘 🚞
F. Fine sand, top ft. MSL	or Z.O.ft.	7. Fine sand material	: Manufacturer, product name & mesh size
F. Fine sand, top ft MSL	34 11	#40/60	
G. Filter pack, top ft. MSL	- 3 00.	Re /	( )
G. Filter pack, top ft. MSL	*2.5"\	b. Volume added	
H. Screen joint, top ft. MSL	- 5 AA- 1		d: Manufacturer, product name & mesh size
H. Screen joint, top ft MSL of	r	#5 otho	<u> </u>
5. 150Y	15 20	b. Volume added	6 BAGS ft <sup>3</sup>
I. Well bottom ft. MSL o	*	9. Well casing:	Flush threaded PVC schedule 40 42 23
			Flush threaded PVC schedule 80  24
J. Filter pack, bottom ft MSL of	x 2.0ft	型 \	Other 🚨 🎇
		10. Screen material: _	PVC
K. Borchole, bottom ft MSL of	r_13.0 ft.	a. Screen type:	Factory cut 🗵 11
4.			Continuous slot   0 1
L. Borehole, diameter _ 6.0 in.	<b>₹.£</b> £		Other 🛘 🌉
		b. Manufacturer _	MONOFILEX
M. O.D. well casing $2.25$ in.		c. Slot size:	0. <u>010</u> in.
		d. Slotted length:	<b>/</b> 0. <b>Q</b> ft
N. I.D. well casing _ Zoo in.		11. Backfill material (1	pelow filter pack): None 🔁 14
11. 11. Homeasurg _ 2 = III.		a a a service interest (	Other 🗆 🚉
I hereby certify that the information on this for	m is true and correct to the he	est of my knowledge	
		acorny knowledge.	
Signature	Biz he		•
1 N. M. KIN NAV. V	I IDI IAIC.		

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

	Watershed/Wastewater		Retucut [_]	MONITORING WEI Form 4400-113A	L CONSTRU Rev. 7-98	JCTIOI
	Remediation/Redevelopme					
Facility/Project Name DONNE, LLP	Local Grid Location of W	t □ 8: Λεη □ βι	r = \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	Well Name MW-	-3	_
Facility License, Permit or Monitoring No.	Local Grid Origin 🔲 (	stimated: 🔲 ) or	Well Location	Wis. Unique Well No.	. DNR Well I	אס
Facility ID	St. Plane		fr. E. S/C/N	Date Well Installed	109120	== - 0/
	Section Location of Wast	e/Source		1 111 111	_ 0 0 Y Y	v
Type of Well	14 of 14 of	Sec, T	n.r. 🛮 🖁	Well Installed By: Na	•	and n
Well Code/	Location of Well Relative		Gov. Lot Number	KENN McCu	MOEZ	
Distance from Waste/ Enf. Stds.	u Upgradient	s Sidegradient	Gov. Lot Number	70 (	0	
Sourceft Apply _		n 🗆 Not Known		BASSELMAN		
The state of the s	ft MSL	<u> </u>	Cap and lock? Protective cover pi	ine:	₹ Yes □	l N
B. Well casing, top elevation	fL MSL		a. Inside diameter:	•	A	. <u>ن</u>
C. Land surface elevation	ft_MSL	a 1 1 1 2	b. Length:		_ <b>5</b>	
D. Surface seal, bottom ft. MS	Lor _ 1.0 ft.		c. Material:		Steel 🔼 Other 🗆	
12 USCS classification of soil near screen	150	A LOCAL	d. Additional prote	ection?	☐ Yes 🗷	N.
	W D SP D	H   187 /	If yes, describe:			. ••
SM SC ML MH C			n yes, deserve.			3.0
Bedrock 🗆		Ø Ø \ 3.5	Surface scal:		Bentonite 🗵	
					Concrete 😂	
13. Sieve analysis performed?	es El No				Other 🛚	*
14. Drilling method used: Rota	ry □ 50	₩ ₩ 4.1	Material between w	vell casing and protective	ve pipe:	•••
Hollow Stem Aug	cr 🛂 4 1		•		Bentonite	30
	ner 🗆 🚟				Other 🛘	2
				a. Granular/Chippe		3
15. Drilling fluid used: Water 02	Air 🗆 01	3). A	imular space scal:	a. Oraninar Chippe		
	me <b>2</b> 99			d weight Bentonite		35
Dimmig Man 2 03 No	me za 33			d weight Bento		3
16 Delling additions used?				: Bentonite-ce		5
16. Drilling additives used?	E ENO	<b>⊠</b> 83 € -	/ BAG F1 3 v	volume added for any o	f the above	
	1 8	<b>₩</b> f	How installed:		Tremie 🛮	0.1
Describe	j 🙀		110 % 2100220	Tremi	ic pumped 🔲	0
17. Source of water (attach analysis, if require	ed):	₩ <b>₩</b>		-	Gravity 🛭	0.0
			lentonite seal:	a Rentonit	te gramules [	33
	<del></del>	10 KM				
	1 6	₩ БЖ Ь.	. 1.1/4 m. ₩3/8	in. □1/2 in. Bent		3
E. Bentonite seal, top ft. MSL	or Qir.	·			Other []	
F. Fine sand, top ft. MSL o	ar Zon X	7.F	ine sand material:	Manufacturer, product	i name & mesh	. size
	, / 18		#40/60	Otho		<b>X</b> .
G. Filter pack, top ft. MSL o	x 3.9ft.	ь.	Volume added			
H. Screen joint, top ft. MSL o	or Z . Q ft.	8.Fi		Manufacturer, produc		
			Volume added_	5 B465 ft <sup>3</sup>	<del></del>	<b>2</b>
. Well bottomft. MSL o	r_15.0ft	M-21-17	cll casing: F	lush threaded PVC sch		
		<b>富光</b>	F	lush threaded PVC scho		
Filter pack, bottom ft MSL o	r_12.0ft			2.1.6	Other [	
* * * * * * * * * * * * * * * * * * *	- 15 DA		creen material:			11
C. Borchole, bottom ft MSL o	r_12.511	a.	Screen type:		actory out 🖴	
/ <u>/</u>				Contin	uoras slot 🔲	
_Borehole, diameter _ /6.0 in.	12				Other 🛘	<u> </u>
•		\ b.	Manufacturer^	10NOFLEX		
M. O.D. well casing _ 2.25 in.		1	Slot size:		0.019	Qir :
it. O.D. Hon owning		1	Am		19.9	<u>⊃</u> fi -
7.50		. •	-	laur filltan ma alak	None 🖴	j.
I. I.D. well casing _ 2.60 in.		11. Ba	ckfill material (bel	ion inex back):	Other 🗆	
					OUEI LI	<u> </u>
hereby certify that the information on this for	m is true and correct to the	best of my knowled	gc.			_
ignature 1/1/1/10	Firm -					. 1
~ QHHILLU	BT 1.	ır			•	

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file-these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable intermediation on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be

State of Wisconsin Department of Natural Resources Route to:	Watershed/Wastewater ☐ Remediation/Redevelopment☑	Waste Management	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 7-98
Facility/Project Name	Remediation/Redevelopment	Nft	Well Name MW-4
Facility License, Permit or Monitoring No.	Local Grid Origin	ed: \( \) or Well I costion \( \)	Wis. Unique Well No.   DNR Well ID No.
Pacinty Leense, Permit of Monitoring No.	Lat. "L	en. —) or wentercation —	PB166_
Facility ID		ongor	Date Well Installed
Pacinty ID	St. Planeft. N.		Date Well Installed 04/09/2001
Type of Well	Section Location of Waste/Soun	œ ne	m m d d y y y y  Well Installed By: Name (first, last) and Firm
• •	1/4 of1/4 of Sec	,T N, R 🗒 🕏	Kein Mc Cunser
Well Code/	Location of Well Relative to Wa	ste/Source Gov. Lot Number	FEWN PLEAMER
Distance from Waste/ Enf. Stds.		Sidegradient	BADGER STATE DELLING, INC.
Sourceft Apply _	d Downgradient n	Not Known	
A. Protective pipe, top elevation	ft_MSL	1. Cap and lock?	28 Yes □ No
	ft. MSL	2. Protective cover p	•
B. Well casing, top elevation		a. Inside diameter	: <u>[Q.e.in.</u>
C. Land surface elevation	ft_MSL	b. Length:	_ <b>L .o</b> .ft.
		c. Material:	Steel 💋 04
D. Surface seal, bottom ft. MS	Lor / .Q ft.	X The second sec	Other 🗆 🦥
12. USCS classification of soil near screen		d. Additional prot	
	w - SP -	If yes, describe	
	LE CH I	1 1 12,000	Bentonite □ 30
Bedrock 🗆		3. Surface scal:	Concrete 52 01
13. Sieve analysis performed?	es 💈 No	<b>X</b>	
	' 1 1668 D	`	Other 🗆 🧱
1	ry □ 50	W 4. Material between t	well casing and protective pipe:
Hollow Stem Aug			Bentonite 30
Oth	er □ 🕮   👹	<del></del>	Other 🛘 🚟
7. 5.00		5. Amular space scal	a. Granular/Chipped Bentonite 🖼 33
	Air 🗆 01	bLbs/gal mi	ad weight Bentonite-sand slurry [ 35
Drilling Mud □ 0 3 No	me 22-99	cLbs/gal m	id weight Bentonite slurry 🗆 31
1		d % Bentonit	e Bentonite-cement grout ☐ 50
16. Drilling additives used? ☐ Ye	s 🗗 No	e <u>1 BAG</u> F1 3	volume added for any of the above
_		f. How installed:	Tremie 🔲 0 1
Describe	🟻 🛱 🕏		Tremie pumped 🔲 02
17. Source of water (attach analysis, if require	×d):   👹 🕷	*	Gravity 🗷 08
		6. Bentonite seal:	a. Bentonite granules [ 33
	es <b>7</b> No ed):	h □1/4 in. 🛂3/	8 in. 1/2 in. Bentonite chips 2 32
E. Bentonite seal, top ft. MSL	or / 🗠 ft. , 🧱	g,	Other 🛘 🎬
Li natume scat, ap ta mos			
F. Fine sand, top ft. MSL	or 2. Oft.	7. Fine sand material:	Manufacturer, product name & mesh size
	" / 福 段	1 , #40/60	5tho
G. Filter pack, top ft_ MSL o	- 30a N 1	d /	1 BAG ft <sup>3</sup>
G. Filter pack, top ft. MSL	or 2.0 ft.	b. Volume added _	
H. Screen joint, top ft_ MSL o	- 500- 月日	· -	: Manufacturer, product name & mesh size
H. Screen joint, top ft. MSL of	*	#5 OHO	<u> </u>
I. Well bottom ft. MSL o	1600	b. Volume added _	ft.3 Flush threaded PVC schedule 40 ≥ 23
I. Well bottom ft MSL o	4-73.5m/ ()		
		1	
J. Filter pack, bottom ft MSL o	4-13.0 L		Other 🗆 🎇
	15.30	10. Screen material:	Marcotter PVC
K. Borehole, bottom ft MSL o	r_12.0 ft	a. Screen type:	Factory cut 🗷 1 1
			Continuous slot 🔲 01
L. Borehole, diameter _ 6.9 in.	\ <u></u>		Other 🗆 🌋
		b. Mamufacturer	MONOFLEX
M. O.D. well casing $2.25$ in.		c. Slot size:	0. <u>U</u> ( <u>Q</u> in.
· · · · · · · · · · · · · · · · · · ·		d. Slotted length:	16.0 ft.
N. I.D. well casing 7. 00 in.		11. Backfill material (be	elow filter pack): None 🗷 14
			Other 🗆 🚆
hereby certify that the information on this for	m is true and correct to the best of	of my knowledge.	
	Firm _		
Signature () III III	TERZ (NC		•

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsia Department of Natural Resources Route to: 1	Watershed/Wastewater	Waste Management	MONITORING WELL CONSTRUCT
	Remediation/Redevelopment		Form 4400-113A Rev. 7-98
Facility/Project Name DONDE LLP	Local Grid Location of Well ft.		Well Name PZ-1
Facility License, Permit or Monitoring No.		red: \( \) or Well Location \( \)	Wis. Unique Well No.   DNR Well ID No
		Long.	PB165
Facility ID	St. Plancft. N.	fl. E. S/C/N	Date Well Installed of 1 20 0 1
Type of Well	Section Location of Waste/Sour		Well Installed By: Name (first, last) and F
Well Code	1/4 of1/4 of Sec_		Kan McComber
Distance from Waste/   Enf. Stds.	Location of Well Relative to W. u  Upgradient s	aste/Source Gov. Lot Number Sidegradient	
Sourceft. Apply _	d Downgradient n	Not Known	BASGER STATE DOWNE, In
A. Protective pipe, top elevation	ft_MSL	1. Cap and lock? 2. Protective cover	Yes Nc
B. Well casing, top elevation	ft. MSL	a. Inside diameter	
C. Land surface elevation	ft_MSL	b. Length:	_1.Qft
D. Surface seal, bottom ft. MSI	Lor _ 1.0 ft.	c. Material:	Steel 🔁 0 d
12. USCS classification of soil near screen:	\$2.43\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	d. Additional pro	
	W 🗆 SP 🔲	If yes, describe	
	TE CHO	LT \ \	Bentonite □ 30
Bedrock [	<b>1</b>	3. Surface scal:	Concrete 💆 0
13. Sieve analysis performed?	es 🖪 No		Other 🛘 💥
14. Drilling method used: Rota	ry 🗆 50	4. Material between	well casing and protective pipe:
Hollow Stem Aug	cr 🗺 41		Bentonite 🗷 3 🗅
Oth	er 🗆 🎇 📗	<b></b>	Other 🛘 🚆
		5. Armular space sea	g:   • Granular/Chipped Bentonite   • 35
,	tir □ 01	bLbs/g el m	nd weight Bentonite-sand slurry ☐ 35
Dimmig Man C 03 No	ne 🛭 99		nd weight Bentonite slurry 🔲 3
16. Drilling additives used?	s 12 No		Bentonite-cement grout 5
_			volume added for any of the above  Tremie   0
Describe		f. How installed:	Tremie pumped 🗆 0;
17. Source of water (attach analysis, if require	zd):		Gravity 🛎 08
		id Id 6. Bentonite seal:	a. Bentunite granules [ 33
		b. □1/4 in. 🖾3,	8 in. D1/2 in. Bentonite chips 🗷 32
E. Bentonite seal, top ft MSL of		/ c	Other 🛘 🎬
F. Fine sand, top ft. MSL o	or _ 22.0ft.	W Z	Manufacturer, product name & mesh size
		2 Otho #40	•
G. Filter pack, top ft. MSL o	r_63.0 ft	b. Volume added	
H. Screen joint, top ft. MSL o	- 25 On -	8. Filler pack material	: Manufacturer, product name & mesh size
H. Screen joint, top ft. MSL o	13.1 12.5	b. Volume added	3 BAGS ft3
I. Well bottom ft. MSL o	- 30.0ft	9. Well casing:	Flush threaded PVC schedule 40 23
			Flush threaded PVC schedule 80 24
I. Filter pack, bottom ft MSL o	r_30.0 ft		Other 🛘 🎇
K. Borchole, bottom ft MSL o	- 30 sa.	10. Screen material: _	PVC Factory cut   11
C. Horchole, bottom Tr MSL 0		a. Screen type:	Continuous slot   0 1
_ Borehole, diameter C. ≥ in.		\	Other 🗆 🌉
2 25		b. Manufacturer	0,010in.
1. O.D. well casing $-2.25$ in.		c. Slot size: d. Slotted length:	_ <b>5.</b> O tr
I ID will sain - 7 ca A .		11. Backfill material (b	
I. I.D. well casing _ 3.00 in.		11. Dackini maicrat (D	Other 🗆 🚆
hereby certify that the information on this for	n is true and correct to the best	of my knowledge.	
ignature ONIALLO	Firm		
( )LKNONL	BT, luc		

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Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

me and Address of Facility Contact/Owner/Responsible Party  st Last Vame: Name: WARREN	I hereby certify that the above information is true and correct to the best of my knowledge.
tility/Firm: Denoe, LLP	Signature: QHV.Vell
Street: ZII S. PATERSON SMEET	Print Name: CWW VANCE
ty/State/Zip: MADISON, WI 53703	Firm: B12 \ \wc,

Department of Natural Resources	Form 4400-113B Rev. 7-98
•	Waste Management
Route to: Watershed/Wastewater Remediation/Redevelopment	
1 4 4	WE MW-2
Facility License, Permit or Monitoring Number County Code	
13	<u> </u>
1. Can this well be purged dry?  2. Well development method  surged with bailer and bailed  surged with black and pumped  surged with block and bailed  surged with block and pumped  surged with block, bailed and pumped  compressed air  bailed only  pumped only  pumped slowly  Other  3. Time spent developing well  4 1  4 1  4 1  4 1  5 1  7 0  5 1  9 10	Before Development After Development  11. Depth to Water (from top of well casing)  Date  b. \( \frac{04}{0} \) \( \frac{09}{0} \) \( \frac{7}{0} \) \( \frac{0}{0} \) \( \frac{04}{0} \) \( \frac{09}{0} \) \( \frac{7}{0} \) \( \frac{09}{0} \) \( \frac{7}{0} \) \( \frac{09}{0} \) \( \frac{7}{0} \) \( \frac{0} \) \( \fr
5. Inside diameter of well 2 . o o in.	
6. Volume of water in filter pack and well casing	Fill in if drilling fluids were used and well is at solid waste facility:  14. Total suspended mg/l mg/l solids
9. Source of water added	15. COD mg/l mg/l
y. Source of water amen	
10. Analysis performed on water added?	16. Well developed by: Name (first, last) and Firm  First Name: Chess Last Name: VAILE  Firm: Bt luc.
17. Additional comments on development:	
Name and Address of Facility Contact/Owner/Responsible Party  First Last WAREEN  Name:	I hereby certify that the above information is true and correct to the best of my knowledge.
Facility/Firm: DONDE, LL?	Signature: QHV. VIII
Street: 211 S. PATERSON FREET	Print Name: CHER VAHLE

Firm:

City/State/Zip: MADISON, WI

Route to: Watershed/Wastewater	<b>⊤</b> □	Waste Mar	nagaman	ıt 🗀		
Remediation/Redevelo	ppment 🔀	Other 🔲				
	unty Name			Well Name		
DOMDE, LLP	NAG			1	mw-3	
Facility License, Permit or Monitoring Number Con	unty Code	Wis. Uniqu			DNR W	ell ID Number
	13		<u> </u>	169_		
1. Can this well be purged dry?	□ No	11. Depth t				After Development
2. Well development method		(from top well casi		<u> </u>	<u>6</u> <u>-</u> It.	_10.70 ft.
surged with bailer and bailed 41		Well Casi	118)			
surged with bailer and pumped <b>2</b> 61		Data		04.~9	1.700	04,09,200
surged with block and bailed 42		Date		b. m m / d -	1/500	$\frac{0}{y} \frac{1}{m} \frac{04}{m} \frac{09}{d} \frac{200}{y} \frac{09}{y}$
surged with block and pumped						
surged with block, bailed and pumped 70		Time		. 13 . 30	) <b>22</b> p.m.	_15:00 g.p.m.
compressed air 20		1 11.0		<u> </u>		
g		12. Sedimen	t in well	۵	<u>O</u> inches	_ O O inches
panipos and		bottom				
pumped slowly \( \omega \) 5 0 Other		13. Water cla	arity	Clear 📋 1 Turbid 🔼 1		Clear ⊠ 20 Turbid□ 25
3. Time spent developing well q o n	nin.			(Describe)		(Describe)
4. Depth of well (from top of well casising) $-\frac{16.4}{}$	ft.		*	Brewa/si	L l'i	FRANSE VIENT
. Inside diameter of well Z . O O	in.					
6. Volume of water in filter pack and well casing 5.9	gal.	Fill in if drill	ling fluid	is were used an	d well is a	at solid waste facility:
7. Volume of water removed from well Z o . o	- 1					mg/l
Volume of water added (if any)O_C_	gal.	solids			-	
9. Source of water added		15. COD			mg/l	mg/l
		16. Well deve	loped by	y: Name (first, la	st) and Firm	
10. Analysis performed on water added?   Yes [	□ No	First Name:	Cruzi	S	Last Name	: VAHLE
(If yes, attach results)		Firm: BT	ک <sub>ر اید</sub> ر			
7. Additional comments on development:						
				•		
,						
rst Last WARZEN	y	I hereby co		t the above info	ormation is	s true and correct to the best
Name: Name:		Signature:		MYKIL		
cuity/Firm:		Print Name:				
ircet: 211 S. PATERSON STREET		rnni Name:_				
ty/State/Zip: Mnason, W. 53703		Firm:	BT2,	luc.		

DIGIL OF MISCORDIN MONITORING WELL DEVELOPMENT Department of Natural Resources Rev. 7-98 Form 4400-113B Waste Management Route to: Watershed/Wastewater Remediation/Redevelopment Other [ Facility/Project Name Well Name County Name Donde LLP BT2 #1952 Dane MW4 Facility License, Permit or Monitoring Number County Code DNR Well Number Wis. Unique Well Number PB166 <u>13</u> 1. Can this well be purged dry? Before Development After Development Yes Yes No 11. Depth to Water 2. Well development 10 48 ft. \_\_10\_51\_ft. (from top of 41 surged with bailer and bailed well casing) 61 surged with bailer and pumped 42 surged with block and bailed b. 05/02/2001Date 62 surged with block and pumped mm dd yyyy 7.0 surged with block, bailed and pumped 20 a.m compressed air 9:05 bailed only 10 Time 5 1 pumped only pumped slowly 50 00 0 inches 00 0 inches 12. Sediment in well Other\_ bottom Clear 10 Clear 20 3. Time spent developing well 60 min. 13. Water clarity  $\times$  2 5 Turbid X 1 5 Turbid 4. Depth of well (from top of casing) 14 7 ft. (Describe) (Describe) 5. Inside diameter of well 2 00 in. fuel odor fuel odor brown brown 6. Volume of water in filter pack and well very turbid very turbid casing 4 1 gal. 7. Volume of water removed from well 6 0 gal. Fill in if drilling fluids were used and well is at solid waste facility 8. Volume of water added (if any) none gal. 14. Total suspended solids 9. Source of water added mg/l 15. COD mg/l 16. Well Developed by: Name (first, last) and Firm 10. Analysis performed on water added? No Yes First Name: Geoff Last Name: Prior (if yes, attach results) Firm: BT2, Inc. 17. Additional comments on development: 0.4' of product on top of water table Bails dry at 31/2 gallons Recovers 3' in 10 minutes. Name and Address of Facility Contact/Owner/Responsible Party I hereby certify that the above information is true and correct to th First Last best of my knowledge. Name: Don Name: Warren Signature: Firm: Donde, LLP Print Name Geoff Prior Street: 211 South Paterson St BT, Inc., 2830 Dairy Drive, Madison, WI 53704-6751 Firm: City/State/Zip: Madison, WI 53703

See instructions for more information including a list of county codes and well types.

Route to: Watershed/Wastewa	ater 🔲	Waste Management				
Remediation/Redev	elopment 🔀	Other				
acility/Project Name	County Name		Well Name	PZ-1		
Dense, LLP	DANK					
Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well No	umber	DNK W	ell ID Number	
	<u> 13</u>	<u> PB</u>		<u></u>		
1. Can this well be purged dry?	□ No	<ol> <li>Depth to Water</li> <li>(from top of</li> </ol>			After Development / O S_ O_ ft.	
Well development method surged with bailer and bailed		well casing)  Date	b. 04/06 m m/d 6	$\frac{6}{1} / \frac{2}{y} \frac{6}{y}$	<u>01</u> <u>04</u> / <u>09</u> / <u>Z</u> y y m m d d y y 10:4≤□p.m.	<u>O O </u>
70	۹ ـ	-	Brunn/s	LT1	TRANSCICENT	
4. Depth of well (from top of well casisng)	· IL		_ USU NA / 30			
Inside diameter of well	o in.					
7. Volume of water removed from well	O gal.	14. Total suspended solids  15. COD  16. Well developed by First Name: Cwext	y: Name (first, L	mg/l mg/l ast) and Fire Last Nam	at solid waste facility: mg/l  m  te: VAHUE  is true and correct to the be	st.
me and Address of Facility Contact/Owner/Responsible P	ranty	I hereby certify that of my knowledge.	t the above inf	ormation	12 If the strict correct to the sec	
Name: Name:			HV.Vall			
Entry/Fittit.						
Greet: 211 S. PATERSON SMEET			s VAHLE			
y/State/Zip: MAOISON, W. 53703		Firm: <u>B7<sup>2</sup>, 1</u>	NC.			